

## MK7227 Postgraduate Dissertation

Student Number: 1247002

	Comments	Max Mark	Actual Mark
<b>Introduction</b>  <i>Identification of a valid topic, research question and objectives framed to Masters Level standard with academic rationale developed, clear industry contextualisation of the research topic</i>	Supervisor Comments:	10%	
	2 <sup>nd</sup> marker Comments:		
<b>Critical Literature Review</b>  <i>Depth and breadth of literature search, engagement with seminal authors and papers, evidence of a critical approach toward the scholarly literature</i>	Supervisor Comments:	25%	
	2 <sup>nd</sup> marker Comments:		

<p><b>Research Methodology</b></p> <p><i>Evaluation of research philosophies and perspectives. Justification of methodological approach, sampling strategy, data analysis and reliability and validity measures as applicable</i></p>	<p><b>Supervisor Comments:</b></p>	<p><b>15%</b></p>	
	<p><b>2<sup>nd</sup> marker Comments:</b></p>		
<p><b>Data Analysis and Interpretation</b></p> <p><i>Evidence of rigor in data analysis and interpretation procedures, identification of key patterns and themes in the research data, integration of academic theory into explanation of findings</i></p>	<p><b>Supervisor Comments:</b></p>	<p><b>35%</b></p>	
	<p><b>2<sup>nd</sup> marker Comments:</b></p>		

<p><b>Conclusions and Recommendations</b></p> <p><i>Research question and objectives addressed with implications to theoretical and managerial concepts considered. Recommendations provided for theory, practice and future research</i></p>	<p><b>Supervisor Comments:</b></p>	<p><b>10%</b></p>	
	<p><b>2<sup>nd</sup> marker Comments:</b></p>		
<p><b>Organisation, presentation and references.</b></p> <p><i>Well structured and ordered dissertation with correct use of grammar and syntax. In-text citation and bibliography conforming to "Cite Them Right"</i></p>	<p><b>Supervisor Comments:</b></p>	<p><b>5%</b></p>	
	<p><b>2<sup>nd</sup> marker Comments:</b></p>		

<b>Total</b>	<b>First Marker Total</b>	<b>100%</b>	
	<b>Second Marker Total</b>		
<b>Supervisor General Comments:</b>		<b>Agreed Mark:</b>	
<b>2<sup>nd</sup> Marker General Comments:</b>			

**Supervisor's Name: Shazaib Butt**

**Signature: .....**

**2<sup>nd</sup> Marker's Name: Dr. Shampa Roy-Mukherjee**

**Signature: .....**



**AN INVESTIGATION INTO SUKUK AND THE SOCIOECONOMIC DEVELOPMENT IN  
MALAYSIA**

A dissertation submitted in partial fulfilment of the requirements of the Royal Docks School of Business and  
Law, University of East London for the degree of **MSc Islamic Banking and  
Finance**

**May 2017**

**[14798 WORDS]**

I declare that no material contained in the thesis has been used in any other submission for  
an academic award

Student Number: 1247002

Date: 9 May 2017



## Dissertation Deposit Agreement

***Libraries and Learning Services at UEL is compiling a collection of dissertations identified by academic staff as being of high quality. These dissertations will be included on ROAR the UEL Institutional Repository as examples for other students following the same courses in the future, and as a showcase of the best student work produced at UEL.***

***This Agreement details the permission we seek from you as the author to make your dissertation available. It allows UEL to add it to ROAR and make it available to others. You can choose whether you only want the dissertation seen by other students and staff at UEL ("Closed Access") or by everyone worldwide ("Open Access").***

### I DECLARE AS FOLLOWS:

- That I am the author and owner of the copyright in the Work and grant the University of East London a licence to make available the Work in digitised format through the Institutional Repository for the purposes of non-commercial research, private study, criticism, review and news reporting, illustration for teaching, and/or other educational purposes in electronic or print form
- That if my dissertation does include any substantial subsidiary material owned by third-party copyright holders, I have sought and obtained permission to include it in any version of my Work available in digital format via a stand-alone device or a communications network and that this permission encompasses the rights that I have granted to the University of East London.
- That I grant a non-exclusive licence to the University of East London and the user of the Work through this agreement. I retain all rights in the Work including my moral right to be identified as the author.
- That I agree for a relevant academic to nominate my Work for adding to ROAR if it meets their criteria for inclusion, but understand that only a few dissertations are selected.
- That if the repository administrators encounter problems with any digital file I supply, the administrators may change the format of the file. I also agree that the Institutional Repository administrators may, without changing content, migrate the Work to any medium or format for the purpose of future preservation and accessibility.
- That I have exercised reasonable care to ensure that the Work is original, and does not to the best of my knowledge break any UK law, infringe any third party's copyright or other Intellectual Property Right, or contain any confidential material.
- That I understand that the University of East London does not have any obligation to take legal action on behalf of myself, or other rights holders, in the event of infringement of intellectual property rights, breach of contract or of any other right, in the Work.

### I FURTHER DECLARE:

- That I can choose to declare my Work "Open Access", available to anyone worldwide using ROAR without barriers and that files will also be available to automated agents, and may be searched and copied by text mining and plagiarism detection software.
- That if I do not choose the Open Access option, the Work will only be available for use by accredited UEL staff and students for a limited period of time.

### Dissertation Details

Field Name	Details to complete
Title of thesis <i>Full title, including any subtitle</i>	AN INVESTIGATION INTO SUKUK AND THE SOCIOECONOMIC DEVELOPMENT IN MALAYSIA
Supervisor(s)/advisor <i>Separate the surname (family name) from the forenames, given names or initials with a comma, e.g. Smith, Andrew J.</i>	Butt, Shazaib
Author Affiliation <i>Name of school where you were based</i>	Royal Docks School of Business and Law
Qualification name <i>E.g. MA, MSc, MRes, PGDip</i>	MSc
Course Title <i>The title of the course e.g.</i>	Islamic Banking and Finance
Date of Dissertation <i>Date submitted in format: YYYY-MM</i>	2017-05
Does your dissertation contain primary research data? (If the answer to this question is yes, please make sure to include your Research Ethics application as an appendices to your dissertation)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Do you want to make the dissertation Open Access (on the public web) or Closed Access (for UEL users only)?	Open <input checked="" type="checkbox"/> Closed <input type="checkbox"/>

**By returning this form electronically from a recognised UEL email address or UEL network system, I grant UEL the deposit agreement detailed above. I understand inclusion on and removal from ROAR is at UEL's discretion.**

Student Number: 1247002

Date: 9 May 2017

Student Number: 1247002

## **ABBREVIATIONS**

AAOIFI	Accounting and Auditing Organisation for Islamic Financial Institutions
BNM	Bank Negara Malaysia
CMSA	Capital Markets Services Act 2007
EPF	Employees' Provident Fund
GCC	Gulf Cooperation Council
GLS	Generalized Least Squares
IFFIm	International Finance Facility for Immunization
IIFM	International Islamic Financial Market
IMF	International Monetary Fund
KLRCA	Kuala Lumpur Regional Centre for Arbitration
MRT	Mass Rapid Transit
MUIS	Majlis Ugama Islam Singapura
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
ONS	Office for National Statistics
Q	Quarter
SAC	Shariah Advisory Council
SC	Securities Commission Malaysia
SRI	Sustainable and Responsible Investment

Student Number: 1247002

## **GLOSSARY OF ARABIC TERMS**

Fiqh al-Muamalat:	The rulings governing commercial and business activities in an economy. Fiqh, on one hand, is the corpus of Islamic jurisprudence. Muamalat, on the other hand, denotes economic and business transactions.
Gharar:	Excessive risk in business transactions following the failure to gather adequate information or asymmetric information about price, quality, and quantity or the date of delivery of the assets.
Ijarah:	An agreement involving one party (lessor) to grant the rights of using an asset by other party (lessee) at an agreed price over a fixed time. However, the lessor retains the ownership of the asset together with the rights and responsibilities.
Istisna:	A long-term contract where one party agrees to manufacture products and deliver them upon completion at an agreed price. The payments made are usually linked to the project completion.
Maqasid al-Shariah:	The objectives of Shariah including the protection of faith, life, and property.
Mudarabah:	An Islamic contract involving Rab-ul-Maal (capital provider) and Mudarib (provider of

Student Number: 1247002

management expertise) to run business activities.

**Murabahah:** A contract of sale between bank and its client for the sale of goods at a price plus an agreed profit margin for the bank.

**Musharakah:** A partnership structure with profit and loss sharing mechanism used in Islamic finance, in which the parties share profits on a pre-agreed ratio whilst losses are shared pursuant to their equity participation.

**Riba:** Riba is commonly associated with “premium” that must be paid by the borrower to the lender together with the principal amount.

**Shariah:** Islamic canonical law derived from Holy Quran and traditions of Prophet (Hadith and Sunnah), Ijtihad (reasoning by Mujtahid or Shariah scholars), and Qiyas (analogy).

**Sukuk:** Islamic alternative of conventional bonds.

**Waqf:** An Islamic endowment such as donating a building and a plot of land for charitable purposes.

**Zakat:** The religious obligations for Muslims to pay a fixed portion of their wealth for charitable purposes.



Student Number: 1247002

## **ABSTRACT**

Under the umbrella of Islamic Capital Market, sukuk have emerged as one of the financial instruments which has significantly helped to deepen the capital market. Historically, Malaysia is the first country to raise sukuk in the early 1990s and it continues to reign as the market leader of global sukuk market till today. This accomplishment is very much determined by the rules and regulations imposed by the Central Bank of Malaysia (or Bank Negara Malaysia) and Securities Commission aside from the full support from the Malaysian government. Above all, sukuk are claimed to play a significant role in the socioeconomic development of the country. However, existing literature do not provide a clear-cut proof on the relationship between sukuk and the socioeconomic development. Thus, the purpose of this study is to empirically evaluate the claim particularly in relation to Malaysia over the study period of Q1 2011 to Q4 2016. The study was scrutinized using a simple regression method through EViews 9.0. Among the dependent variables undertaken to proxy the socioeconomic conditions in Malaysia were (i) Gross Domestic Product (GDP) Annual Growth Rate (ii) Gross Fixed Capital Formation (GFCF) (iii) Consumer Price Index (CPI) (iv) Interest Rate (v) Inflation Rate (vi) Unemployment Rate and (vii) Labor Force Participation Rate. Interestingly, the regression results somewhat revealed a significant impact of sukuk issuance to the development of Malaysia's economy and society throughout the study period.

**Keywords:** Islamic Capital Market, Sukuk, Malaysia, socioeconomic development

Student Number: 1247002

## **ACKNOWLEDGEMENT**

*In the Name of Allah, the All Merciful, the All Beneficent*

All praises to the Almighty Allah who has bestowed on me strength and ability to complete this dissertation.

I am taking this opportunity to express my genuine appreciation to my supervisor, Shazaib Butt for his kind guidance as well as constructive criticisms and suggestions. The accomplishment of this paper could have not been possible without his constant encouragement. I also wish to record my sincere gratitude to my personal tutor, Dr. Shampa Roy-Mukherjee for her invaluable assistance throughout the study period.

Next, my deepest gratitude goes to Iqbal Asaria for his guidance particularly on the Islamic Banking and Financial Regulations, which enabled me to critically evaluate the performance of Islamic Financial industry as well as to Mushtak Parker who enlightened me on the ever-growing sukuk market in Malaysia. I would also like to acknowledge Siraj Sait's contribution in conducting regular workshops, which offered me an excellent opportunity to widen my knowledge in this discipline. My sincere appreciation goes to Dr. Stefan Lutz for his inspiring guidance on Econometrics, which I must say, significantly contributed to the completion of this dissertation.

A special gratitude and love goes to my father who has been my source of inspiration and who has been enthusiastic in updating me with the latest developments on the Malaysian sukuk market. I thank profusely my mother, for her untiring love, patience and understanding. I am also indebted to my siblings who have always been there to support me despite the distance.

Last but not least, I wish to express my heartfelt appreciation to my friends for helping me to cope with the journey of undertaking MSc Islamic Banking and Finance at the University of East London.

Jazakumullahu khairan.



## TABLE OF CONTENTS

<b>ABBREVIATIONS .....</b>	<b>i</b>
<b>GLOSSARY OF ARABIC TERMS.....</b>	<b>ii</b>
<b>ABSTRACT .....</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT .....</b>	<b>v</b>
<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 Background .....	1
1.2 Research Objectives .....	5
1.3 Research Question .....	6
1.4 Research Design .....	7
1.5 Research Structure.....	7
<b>CHAPTER 2 LITERATURE REVIEW .....</b>	<b>9</b>
2.1 Understanding Sukuk .....	9
2.2 The Malaysian Sukuk Market .....	11
2.2.1 Background .....	11
2.2.2 Rationales Behind Malaysia's Success.....	13
2.3 Case Studies in Malaysia.....	16
2.4 A Review of Empirical Literature: The Relationship Between Sukuk and the Socioeconomic Development .....	18
<b>CHAPTER 3 RESEARCH METHODOLOGY .....</b>	<b>22</b>
3.1 Type of Research.....	22
3.2 Sources of Data.....	22
3.3 Research Method.....	23
3.4 Data Characteristics .....	24
3.5 Empirical Model .....	27
3.6 Reliability and Validity of the Research .....	29
3.7 Limitations of the Study .....	30
<b>CHAPTER 4 DATA ANALYSIS .....</b>	<b>31</b>
4.1 Introduction .....	31
4.2 Main Result of Descriptive Statistics .....	32

Student Number: 1247002

4.3	Results Analysis .....	36
4.3.1	GDP Annual Growth Rate .....	36
4.3.2	Gross Fixed Capital Formation .....	37
4.3.3	Consumer Price Index .....	38
4.3.4	Inflation Rate .....	39
4.3.5	Interest Rate .....	39
4.3.6	Unemployment Rate .....	40
4.3.7	Labor Force Participation Rate .....	41
4.4	Discussion of Research Findings .....	42
<b>CHAPTER 5 CONCLUSION AND RECOMMENDATIONS .....</b>		<b>47</b>
5.1	Research Objectives and Question Revisited .....	47
5.2	Summary of Findings .....	47
5.3	Implications of the Study .....	49
5.4	Recommendations for Future Research .....	49
5.5	Concluding Remarks .....	50
<b>REFERENCES .....</b>		<b>53</b>
<b>APPENDICES .....</b>		<b>64</b>

## CHAPTER 1 INTRODUCTION

Currently, Islamic Finance industry is growing at a phenomenal rate and evolving into one of the imperative segments in the global financial system. Mughal (2017) reported that the total volume of this niche industry is approximately US\$2.3 trillion covering Islamic Banking, Sukuk, Islamic Fund or Asset Management, Takaful as well as Islamic Microfinance. With the estimated growth of between 13% to 15% in 2017, the growth trajectory is projected to hit US\$2.7 trillion by the end of this year and US\$3 trillion by the next decade or so (Mughal, 2017).

Islamic Banking is by far the biggest driver to the success of Islamic Finance space. In 2016, the Islamic Banking sector accounted for 80% of the total volume of the Islamic Finance industry (Mughal, 2017). Contrary to conventional banking which accepts the practice of Riba, Islamic Banking offers banking and financial products that are free from Riba<sup>1</sup> to Muslim and non-Muslim communities (Bakar, 2008). This is followed by sukuk which accounted for 14% of the total assets in the faith-based financial industry (Mughal, 2017). Oftentimes, sukuk are regarded as the best instrument in Islamic Capital Market to access liquidity in the economy. Consequently, the sukuk market continues to proliferate and attract issuers from Muslim and non-Muslim organizations (Seshachellam, 2013).

### 1.1 Background

A pure debt security is strictly impermissible in Islamic Finance, ascribable to the banning of Riba and Gharar<sup>2</sup> in Shariah principles. Nonetheless, the debt obligation that is associated with the performance of an underlying asset is admissible under the purview of Fiqh al-Muamalat, which then led to the emergence of a new terminology known as sukuk in Islamic fiqh manuals (Zulkhibri, 2015; SC, 2009; Iqbal and Mirakhor, 2011). Theoretically, sukuk (plural of Sak) are trust certificates against an asset or a pool of assets with the

---

<sup>1</sup> The Divine Scriptures (Injil, Torah, and Holy Quran) forbid the practice of Riba. See Surah Al-Baqarah [2:275] in the Holy Quran (Bakar, 2008).

<sup>2</sup> The proscription on Gharar is described in Surah An-Nisa' [4:29] in the Holy Quran (SC, 2009).

Student Number: 1247002

attributes of liquidity, tradability<sup>3</sup>, and cash equivalence (SC, 2009). Sukuk appear as a niche instrument in Islamic Capital Market and are thus far deemed a high-profile instrument across the universe (IIFM, 2016). In general, sukuk are very alike to conventional securitization. Both structures typically involve a process of forming a pool of assets such as account receivables, home equity loans, credit card payoffs, and mortgages and hence, the securities are raised against it (Iqbal and Mirakhor, 2011).

In spite of the new terminology in modern times, historical records show that the basic concepts of sukuk and their practice are traceable since the beginning of Islamic civilization (Engku Ali, 2008). Nisar (2010) justified that soldiers and public servants were paid using cash and in kind by the Umayyad government in the first century Hijiri. The payment in kind was in the form of Sukuk Al Badai particularly commodity coupons or gain permits. In February 1988, modern forms of sukuk are endorsed by the Fiqh Academy of the Organisation of the Islamic Conference (OIC). It is ruled that *"..any collection of assets can be represented in a written note or bond; and that this bond or note can be sold at a market price provided that the composition of the group of assets, represented by the security, consists of a majority of physical assets and financial rights, with only a minority being cash and interpersonal debts"* (IIFM, 2010).

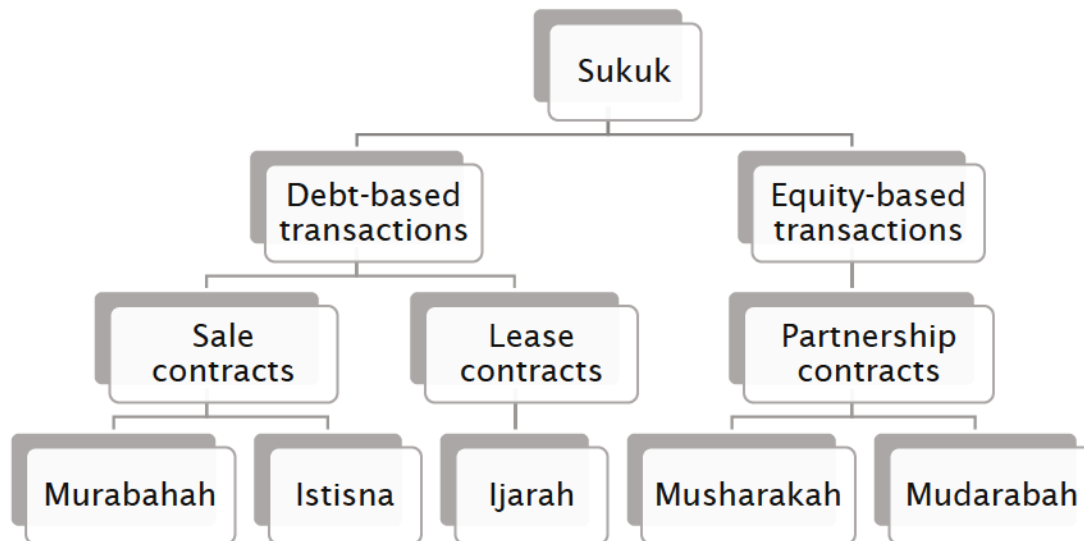
The Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) as the reigning standard-setting body for the Islamic Finance industry, has authorized at least 14 sukuk structures (see Appendix 1). Mokhtar et al. (2010) have grouped sukuk into two different classes. On one hand, debt-based sukuk consist of sale and lease contracts that mirror exchange contracts, thus resulting in fixed returns given to sukuk-holders similar to bonds (e.g. Murabahah, Istisna, and Ijarah). On the other hand, equity-based sukuk portray a partnership agreement between parties. The return to sukuk-holders is

---

<sup>3</sup> Note that several sukuk structures including Sukuk Salam and Sukuk Murabahah are not tradable in the GCC countries owing to different Shariah interpretations on debt trading (SC, 2009).

Student Number: 1247002

contingent on the performance of the underlying assets, hence, the principal amount is not guaranteed (e.g. Musharakah and Mudarabah).



**Chart 1.1: Common Sukuk Structures**

Source: Mokhtar et al. (2010)

Historically, Malaysia was the first country to raise modern forms of sukuk and it subsequently formed the genesis of contemporary sukuk market. In particular, modern forms of sukuk were kickstarted in 1990, with the debut of Islamic Private Debt Securities (IPDS) amounting to RM125 million by Shell MDS<sup>4</sup> (Engku Ali, 2008). Since then, the global sukuk market has developed at best piecemeal and has now become an attractive alternative financial market across the globe (Grewal, 2013).

According to IIFM (2016), the overall growth of sukuk has been spectacular. Since the beginning of 2001, sukuk have been progressing decently. Sukuk eventually reached the highest peak in 2012, with the value of US\$137.5 billion. The overall sukuk growth remained resilient in 2013 but decreased gradually in 2014. It then experienced a massive fall to US\$60.6 billion in 2015, representing a 43%

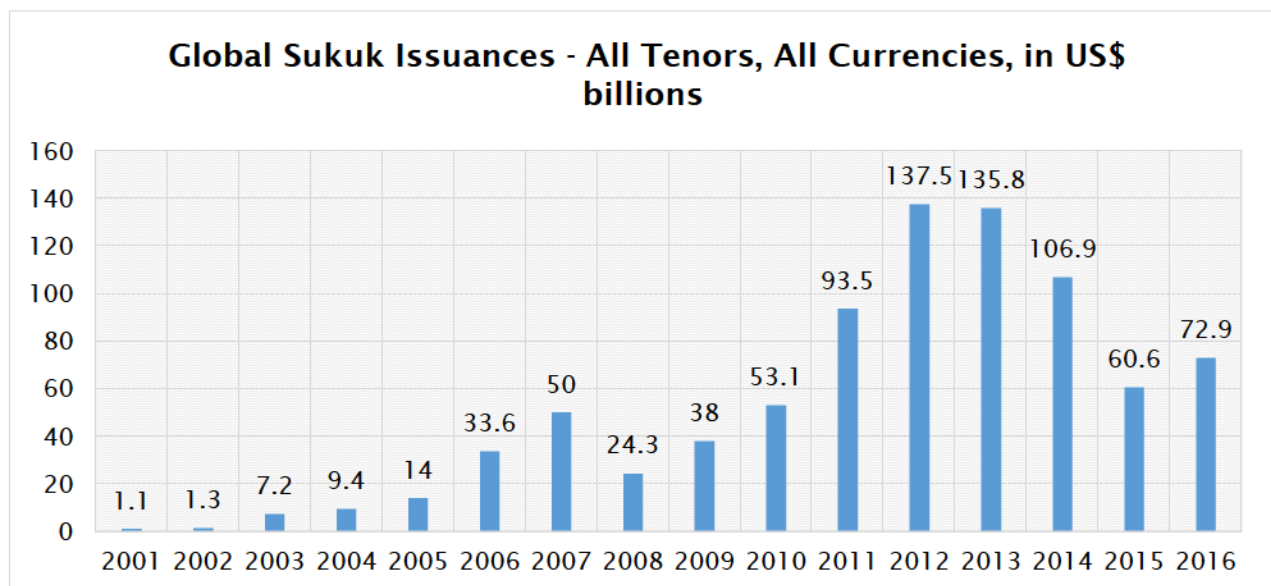
<sup>4</sup> Example of other early issuances in Malaysia is the RM300 million Petronas Dagangan Bhd's IPDS in 1994. Meanwhile, the example of Islamic securitization issuances from different regions in the early 2000s is Qatar's USD700 million Sukuk Ijarah (Engku Ali, 2008).



Student Number: 1247002

downtrend contrary to 2014. Among the factors behind this temporary phenomenon were the volatilities in the global economy, the current political issues in the Islamic world, and the oil prices crash. Besides, Malaysia's decision to halt its short-term sukuk issuance and to switch to other liquidity management instruments has exacerbated the matter as Malaysia is the major issuer of sukuk (IIFM, 2016).

Nevertheless, the global sukuk market is slowly gaining its momentum back after experiencing a rough year in 2015. In 2016, the global sukuk issuance has escalated to US\$72.9 billion (Idris, 2017). According to Mughal (2017), US\$78 billion of sukuk is expected to be raised in 2017. Going forward, the sukuk market is a promising sector.



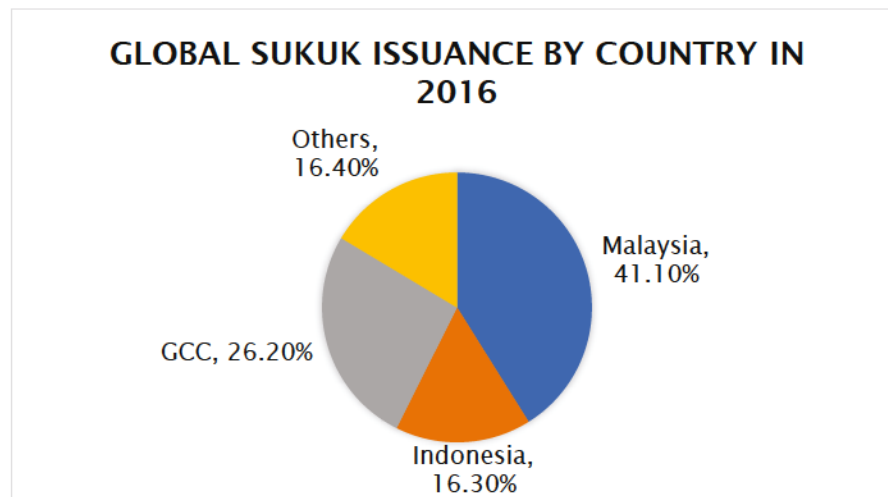
**Chart 1.2: Global Sukuk Issuances 2001-2016**

Source: IIFM Sukuk Report 5<sup>th</sup> Edition and RAM Ratings report

By domicile, Malaysia is the largest contributor in global sukuk issuance since the inception of the sukuk market (IIFM, 2016). In 2016, Malaysia accounted for 41.1% out of US\$72.9 billion sukuk raised, denoting that Malaysia remains as the reigning champion of the faith-based market (RAM Ratings, 2017). Furthermore,

Student Number: 1247002

both Malaysia and Indonesia have made the Southeast Asia as the stupendous leader in the global sukuk market (see Appendix 2).



**Chart 1.3: Global Sukuk Issuance by Country**

Source: RAM Ratings (2017)

Among the popular industries tapping the Malaysian sukuk market between 2014 and 2016 are financial services, infrastructures and utilities, as well as construction and engineering (see Appendix 3). According to Business Monitor International (2012), the infrastructure and development projects in Malaysia which are financed by sukuk, contribute to economic growth of the country. Meanwhile, the introduction of Sustainable and Responsible Investment (SRI) Sukuk framework in 2014 by the Securities Commission Malaysia (SC) denotes that Malaysia acknowledges the potential of sukuk in fostering the social upliftment in the country (SC, 2015). Recently, the Financial Stability and Payment Systems Report 2016 by Bank Negara Malaysia (BNM) also specified that the sukuk market plays a vital role in developing Malaysia's economy and society.

## **1.2 Research Objectives**

An efficient and effective capital market is a timely boost for the economic development of the nation (Mahmood, 2013). Moreover, Seshachellam (2013) asserted that the robustness of any capital market including Islamic Capital Market can potentially contribute to the speedy growth of the country. In view

Student Number: 1247002

thereof, the success of Islamic Capital Market can potentially contribute to an economic growth within the context of Shariah principles<sup>5</sup>. Alongside the major usage of Islamic products and services by Muslim and non-Muslim communities, the sukuk market as one of the greatest drivers in Islamic Capital Market is also growing tremendously in Hong Kong, Luxembourg, and the United Kingdom (IIFM, 2016). This delineates the global acceptance of sukuk transcending all faiths. At the same time, it is worthwhile to hypothesize that sukuk can bring about a significant impact to the economy.

Apart from Malaysia's lion's share in global sukuk issuance, Malaysia's sukuk issuance has now surpassed its conventional bond issuance. Last year, 32 out of 56 issued ringgit-denominated corporate bonds and sukuk belongs to sukuk (SC, 2016). As at December 2016, Malaysia's Islamic Capital Market dominated the total Malaysian Capital Market by 59.56% (SC, 2016). This subsequently triggered the researcher to critically evaluate the Malaysian sukuk market.

The proliferation of sukuk as an alternative investment has also attracted the attention of academia and media, contributing to the massive growth of literature. Many researchers have been endlessly juxtaposing the performance of sukuk and bonds across regions. Notwithstanding, majority of the scholars examined the role of sukuk in fostering the economic growth of the country, leaving the social aspect lagging behind. Hence, this dissertation aims to rectify the lacuna. The present study adds to the scarce literature and explores the role of sukuk in developing Malaysia's economy and society both theoretically and empirically.

### **1.3 Research Question**

---

<sup>5</sup> A Shariah-compliant financial system basically promotes risk sharing contracts, fair and just financial transactions, as well as the departure from sinful activities (Mohd Sultan, 2008).



Student Number: 1247002

Despite the mushrooming of literature concerning sukuk, the relationship between sukuk and the socioeconomic development of the country remains inconclusive. Hence, the research question is stipulated as:

Research Question: Do sukuk impact the development of the economy and society in Malaysia?

Null hypothesis ( $H_0$ ): There is no statistically significant relationship between sukuk and the development of Malaysia's economy and society.

Alternative hypothesis ( $H_a$ ): There is a statistically significant relationship between sukuk and the development of Malaysia's economy and society.

#### **1.4 Research Design**

A simple regression method is employed to test the validity of the hypotheses between Q1 2011 and Q4 2016, of which the independent variable is Malaysia's sukuk issuance. Meanwhile, the dependent variables are Gross Domestic Product (GDP) annual growth rate, Gross Fixed Capital Formation (GFCF), Consumer Price Index (CPI), Interest Rate, Inflation Rate, Unemployment Rate, and Labor Force Participation Rate to proxy Malaysia's economic and social conditions. Using EViews 9.0, each dependent variable is regressed separately against the independent variable. Accordingly, the regression results will disclose the relationship between sukuk and the development of Malaysia's economy and society throughout the study period.

#### **1.5 Research Structure**

This dissertation comprises five sections. The first chapter briefly discusses on the background of the study, research objectives, research question, and research design of the dissertation. Chapter two dwells on a detailed discussion of the Malaysian sukuk market including its case studies. It is followed by a comprehensive discussion on empirical literature with regards to the relationship between sukuk and the socioeconomic development conducted by previous researchers. Next, chapter three elaborates on the research methodology chosen by the researcher. This chapter justifies the type of research undertaken, sources

Student Number: 1247002

of data, research method selected, data characteristics, empirical model, reliability and validity of the research as well as limitations of the study. Then, the fourth chapter summarizes the empirical findings derived from the regression tests. This chapter also incorporates the analyses of descriptive statistics and regression results. Finally, chapter five concludes the findings by incorporating the summary of findings, implications of the study, recommendations for future research, and overall conclusion of the Malaysian sukuk market.

## CHAPTER 2 LITERATURE REVIEW

### 2.1 Understanding Sukuk

According to Abdul Rahman (2003), the legitimacy of sukuk is narrated in the Holy Quran:

*"O you who have believed, when you contract a debt for a specified term, write it down. And let a scribe write [it] between you in justice ... That is more just in the sight of Allah and stronger as evidence and more likely to prevent doubt between you"*

(Surah Al-Baqarah [2:282])

Various Islamic finance standard setting institutions have attempted to define sukuk. The Bahrain-based AAOIFI expounded 'Investment Sukuk' in its Shariah Standard – Standard 17(2) as *"certificates of equal value representing undivided shares in ownership of tangible assets, usufructs and services (in the ownership of) the assets of particular projects or special investment activity, however, this is true after receipt of the value of the sukuk, the closing of subscription and the employment of funds received for the purpose for which the sukuk were issued"*. Meanwhile, the Securities Commission Malaysia on 'Guidelines on the Offering of Islamic Securities' 2004 interpreted sukuk as *"...any securities pursuant to any Shariah principles and concepts approved by the Shariah Advisory Council (SAC) of the SC as set out in Appendix 1"*. Appendix 1(B) reinforces that sukuk are *"A document or certificate which represents the value of an asset"* (SC, 2009).

In simple layman terms, sukuk are certificates representing a proportionate beneficial ownership of the underlying assets in certain investment projects (SC, 2009). In comparison with bonds, sukuk enjoy the benefit of being backed by assets. Accordingly, sukuk-holders are entitled to a predictable level of return in which they are entitled to share in the revenues derived from the underlying assets and may be entitled to share in the proceeds of the realization of the underlying assets (Mokhtar et al., 2010). Generally, sukuk can either be debt obligations or equity pursuant to the underlying Islamic contracts (Iqbal and

Student Number: 1247002

Mirakhor, 2011). In addition, sukuk can be in a form of hybrid such as convertible and exchangeable sukuk, thereby, sukuk-holders are entitled to both benefits of fixed income instrument and equity<sup>6</sup> (SC, 2009).

According to Khoutem (2014), sukuk can actually provide economic stimulus by utilizing the proceeds for real estate financings and infrastructure projects. Salem, Fakhfekh, and Hachicha (2016) also discussed the role of sukuk in promoting economic growth by collecting and mobilizing financial resources, financing investment projects as well as financing infrastructure and development projects. Additionally, SC (2014) propounded that sukuk can be tapped to finance natural resources such as sustainable land use and biodiversity conservation, community development such as public hospital or medical services and public educational services as well as Waqf properties. Consequently, it is reasonable to state that sukuk are a valuable financing instrument that can be exploited to fund the socioeconomic development activities.

More interestingly, sukuk have also captured the attention of multilateral institutions including Basel Committee, International Monetary Fund (IMF), and World Bank. For instance, Bennett (2015) reported that International Finance Facility for Immunization (IFFIm) of the World Bank has expressed interest in the faith-based market by raising 'Vaccine Sukuk' in 2014 and 2015 to support the immunization of children in emerging countries. This shows that sukuk are not merely a faith-based instrument, instead sukuk are one of the unique financial instruments which injects liquidity in the economy and at the same time, promotes social upliftment in the country.

---

<sup>6</sup> Examples of the successful convertible and exchangeable sukuk issuances in the global sukuk market are Dubai Port Convertible Sukuk 2006 and Malaysia's Khazanah Exchangeable Sukuk 2006 (SC, 2009).

Student Number: 1247002

## **2.2 The Malaysian Sukuk Market**

### **2.2.1 Background**

Malaysia has been successful in fostering a thriving sukuk market since the past few decades. Engku Ali (2008) asserted that the two landmark sukuk issuances in the early 2000s<sup>7</sup> are the major milestones in the Malaysian sukuk market. Following the erstwhile Governor of Bank Negara Malaysia Tan Sri Jaafar Hussein's vision of executing Islamic banking system side by side with the conventional banking system in Malaysia<sup>8</sup>, the Malaysian sukuk market is also operating side by side with the conventional bond market. The Islamic capital market is regulated by Malaysian capital market regulations to ensure similar certainty, clarity and protection for stakeholders. However, the products and services offered are compatibles to Shariah principles (BNM and SC, 2009).

There are different types of issuers tapping the Malaysian sukuk market, ranging from the government, quasi-government agencies, sovereign wealth funds, private sectors, multilateral development banks, and multinational corporations (BNM and SC, 2009). For example, the government started its pioneering effort to raise sovereign sukuk since 2002. Sovereign sukuk generally play a pivotal role in a country's capital market and are deemed most liquid sukuk instrument (BNM and SC, 2009). Additionally, the government has successfully debuted the world longest sovereign sukuk up to 30 years through Wakalah bi al-Istihmar in 2015 (IIFM, 2016). In view thereof, the Malaysian market also caters to risk-seeking investors that consequently facilitates a conducive secondary market.

The Malaysian market also raises corporate and quasi-sovereign sukuk. This emanates from diverse sectors including infrastructure, construction, financial services, and manufacturing (RAM Ratings, 2017). Presently, corporate sukuk

---

<sup>7</sup> Kumpulan Guthrie Berhad has successfully debuted global Sukuk Ijarah issuance amounting to USD150 million in 2001. In 2002, the Malaysian government has pioneered sovereign sukuk of USD600 million (Engku Ali, 2008).

<sup>8</sup> The launching of Tabung Haji (Pilgrimage Fund) by Royal Professor Ungku Aziz in 1963 marked the beginning of Islamic Banking and Finance system in Malaysia (Parker, 2016).



Student Number: 1247002

have become sophisticated in which the structures are well-constructed and molded to the issuers' financing needs (IIFM, 2016). This therefore attracts the attention of many key figures. Consequently, RAM Ratings (2017) reported that 59.4% of Malaysia's outstanding domestic sukuk market was dominated by corporate sukuk in 2016 (see Appendix 4).

In addition, Malaysia liberalizes its market by allowing foreign corporations, multinational corporations, and multilateral agencies to tap the domestic sukuk market. For instance, the ringgit-denominated sukuk was raised by International Finance Corporation of World Bank in 2004. In 2006, the Malaysian market begins to endorse sukuk issued by foreign multinational corporations in the domestic market. Subsequently, several foreign multinational corporations including AEON Credit Services and TESCO Stores (Malaysia) Sdn Bhd successfully raised sukuk (BNM and SC, 2009).

Apart from that, the Malaysian market attracts more investors to tap the sukuk market by embracing innovative asset class. In 2015, the sovereign sukuk raised by the government were backed by the rights to service on a bundle of hospital buildings and the rights to vehicle licensing fees (Sukuk Summit, 2016). Therefore, sukuk are now accessible to a wider level of market participants as the new asset class is relatively affordable contrary to tangible assets (e.g. land and commercial buildings). Besides, Malaysia has made headway into becoming a multicurrency sukuk issuance market. Other than its Ringgit Malaysia, Malaysia has successfully raised US Dollar, Chinese Renminbi, Japanese Yen, and Singapore Dollar (IIFM, 2016).

Malaysia is also active in primary and secondary market, which is lacking in other jurisdictions and causing potential market players to shy away from the sukuk market. Iqbal and Mirakhor (2011) discussed the importance of primary and secondary market and concurred that *"A working primary and secondary market can be a boost to the much-needed liquidity to institutional investors and financial institutions, who become better equipped with portfolio and risk management"*.

Student Number: 1247002

This is strengthened by Fiqh al-Muamalat principles in which the market participants are encouraged to inject liquidity in the economy (Bakar, 2008). With the presence of an active secondary market in Malaysia, the market participants can access the liquidity of the market at prevalent yield price. Furthermore, all Shariah-compatibles securities are listed on Bursa Malaysia under a new regime by listed and non-listed issuers. As at December 2016, 74.23% of the 904 securities listed on Bursa Malaysia is congruent to Shariah principles (SC, 2016).

Lastly, the Malaysian market also taps sukuk to address financial inclusion. Following the SC's Capital Market Masterplan 2, DanaInfra Nasional Berhad raises retail sukuk that are undertaken by retail investors, of which deemed affordable as well as less risky investments<sup>9</sup> (DanaInfra, 2017). Following the SRI sukuk framework initiated by the Securities Commission Malaysia (SC) in 2014, Khazanah Nasional Berhad debuted SRI sukuk a year later (SC, 2016). This portrays the shift in issuers and investors' concerns to not only expecting for the economic return, instead they now seek for both economic and social returns derived from Shariah-compliant investments.

### **2.2.2 Rationales Behind Malaysia's Success**

The stellar growth of the Malaysian sukuk market is associated with its functional regulatory framework initiated by the regulators particularly BNM and SC, which in turn smoothens the procedures of sukuk origination (IIFM, 2016). In addition, Malaysia has initiated Electronic Trading Platform (ETP) and the Real-time Electronic Transfer of Funds and Securities (RENTAS) systems which facilitated an effective bond trading (BNM and SC, 2009). On top of that, international clearing and settlement systems are introduced for the ease of foreign investors. Malaysia has also developed a facilitative framework for local and international issuers in its sukuk market (SC, 2015). Subsequently, this empowers domestic and foreign

---

<sup>9</sup> DanaInfra is promoting financial inclusion to retail investors by widening the investor base through retail sukuk. This empowers investors to diversify their investment portfolios in the sukuk market at an affordable price (DanaInfra, 2017).

Student Number: 1247002

issuers to raise local and foreign denominated currencies sukuk in Malaysia. Above all, the IMF and World Bank have exceptionally endorsed Malaysia's regulatory framework (SC, 2015).

Besides, Malaysia has a strong Shariah governance framework namely the Shariah Advisory Council (SAC) of the Securities Commission (SC, 2009). The SAC acts as a reference centre and is accountable to resolve matters pertaining to the Islamic capital market including its operations<sup>10</sup> (Mohamad, Yusoff, and Qassar, 2010). The members of SAC are Islamic scholars, jurists, and market practitioners who are an expertise in Fiqh al-Muamalat and Islamic jurisprudence, with at least 3 years of exposure in Islamic Finance (SC, 2009). The establishment of a strong Shariah governance framework plays a catalytic role in bringing about the rapid development in Malaysia's Islamic capital market as disputes on Shariah matters can be readily addressed and resolved by SAC.

The biggest contributory factor to Malaysia's accomplishment is the government's committed efforts in turning Malaysia into a regional hub. The government supports the evolutionary process of its sukuk market by facilitating the administrative, infrastructure, and fiscal policies through its long-established public policy pronouncements (BNM, 2016). The government also provides special privilege to those involved in the Islamic Finance industry such as tax exemptions and tax neutrality. In particular, Islamic Finance transactions are treated akin to conventional financing transactions in the event of tax purposes, signifying tax neutrality (SC, 2015). Another example is the authorization of tax deduction pursuant to costs incurred in issuing SRI sukuk as well as sukuk endorsed by SC under the 2016 Malaysian Budget (IIFM, 2016). Accordingly, these incentives trigger more market participants to join the wave of the Malaysian sukuk market.

---

<sup>10</sup> Contrary to some jurisdictions, the SAC of SC has stipulated that the proceeds derived from the sukuk issuance can only be utilized for Shariah-compliant transactions (SC, 2009).



Student Number: 1247002

As demonstrated, Malaysia has an active secondary market. Therefore, sukuk-holders can decide whether to retain their investments till maturity or to obtain more profit by selling at better yield price. This empowers a robust trading activity and boosts the market participants' confidence including foreign multinational corporations to persistently tap the local sukuk market (SC, 2015). Besides, Malaysia has diverse market intermediaries including investment banks, local and foreign Islamic banks, brokers and fund managers who have been very supportive of the sukuk market with the majority of them having raised sukuk in the local market<sup>11</sup> (SC, 2015). Consequently, this deepens the sukuk market in unlocking liquidity in Malaysia's economy.

In contrast to several jurisdictions, Malaysia too provides recourse to law<sup>12</sup>. The legal framework in Malaysia takes into account Islamic Finance matters through a dedicated judge at the High Court level<sup>13</sup> (SC, 2015). This signifies that the system is continuously tested and innovated, which contributes to the exponential growth of the faith-based market. Furthermore, the Kuala Lumpur Regional Centre for Arbitration (KLRC) is accountable for Islamic contract matters in certain areas. This is especially significant to enhance transparency, clarity, and investors' protection (SC, 2015). Among the legislation that governs sukuk is Capital Markets Services Act 2007 (CMSA) which acts as the parameters for permitted capital market activities and thereby reinforces the protection framework (SC, 2009).

---

<sup>11</sup> For instance, Maybank raised a sukuk program amounting to RM10 billion through Murabahah principle to finance its investments (*The Star*, 2016).

<sup>12</sup> The Islamic Finance industry in Malaysia is governed by English Common Law (Md Nor, 2016). Owing to its flexible structure, this adds more confidence to potential market participants to tap the sukuk market.

<sup>13</sup> Over the span of 1983 to January 2010, the total disputes in the High Court of Kuala Lumpur, Malaysia in Jalan Duta have surpassed 3500 (Md Nor, 2016).

Student Number: 1247002

## 2.3 Case Studies in Malaysia

### (i) Sukuk as a viable solution to evolve Malaysia's economy

There has been a growing demand to finance infrastructure and development projects through sukuk in Malaysia. One of the examples is DanaInfra Nasional Berhad's RM46 billion sukuk program<sup>14</sup>, which was allocated to part finance the construction of Mass Rapid Transit (MRT) network in the Greater Kuala Lumpur urban area (SC, 2016). This program has a maturity up to 50 years<sup>15</sup> through Murabahah (via a Tawarruq arrangement) principles. The program is unrated as it is guaranteed by the Malaysian government. In particular, the repayments are made by the government on a deferred payment basis according to yearly allocations. The facility agent involved is CIMB Investment Bank Berhad whilst the Shariah advisor is CIMB Islamic Bank Berhad (DanaInfra, 2017).

Generally, the MRT projects play a pivotal role in improving Kuala Lumpur's urban public transportation system. With the development of an efficient world class rail services in Kuala Lumpur, those living in Kuala Lumpur and suburbs can opt to avoid the ever-worsening traffic congestion during the rush hour by taking the public transportation provided by the MRT. This will potentially lower their transportation costs, reduce stress levels, and more importantly generate huge savings in workers' quality time normally lost in the heavy traffic. This would translate into a greater workforce productivity, the presence of which improves their levels of income leading to their social advancement and welfare in the country. Following the government's efforts to promote the urban growth and livability, it is instructive to note that Kuala Lumpur will eventually become an attractive city capable of attracting more foreign direct investments, multinational corporations, professionals, entertainers, international

---

<sup>14</sup> Also known as the Islamic Commercial Papers (ICP)/Islamic Medium Term Notes (IMTN) program for the MRT Project (DanaInfra, 2017).

<sup>15</sup> The ICPs can be raised between any period of one, three, six, nine, and twelve months whilst the maturity of the IMTNs should be between one year and 50 years (DanaInfra, 2017).

Student Number: 1247002

universities, and tourists for business activities, education, and entertainment in the long run (Kassim, 2016). Consequently, it contributes to Malaysia's economic development. This plan is in alignment with the government's strategy for Malaysia's long-term economic growth by increasing investment and FDI, creation of employment opportunities, and shifting the country into a high-income economy by 2020 through the inception of 2010 Economic Transformation Program (ETP). Undoubtedly, sukuk have since emerged as a viable alternative solution in fostering Malaysia's economic growth.

**(ii) Sukuk are raised to address social finance and financial inclusion**

Following the inception of SRI sukuk framework by SC in 2014, Khazanah Nasional Berhad (2015) debuted Ihsan's RM1 billion Sukuk Program through the principle of Wakalah bi Istithmar in May 2015 with a maturity of 25 years. In June 2015, the first issuance amounting to RM100 million was oversubscribed and rated as AAA(s) by RAM Ratings. The transaction has 4.3% return per annum with a maturity of 7 years. The Shariah advisors during the transactions were CIMB Islamic Bank Berhad and Amanie Advisors Sdn Bhd whereas the lead arranger and lead manager were CIMB Investment Bank. The proceeds would be allocated to a non-profit entity Yayasan Amir which manages Khazanah's Trust School Program. Yayasan Amir is a form of Public-Private Partnership with the Ministry of Education to improve the accessibility of Malaysia's quality education. Furthermore, this program imitates a "Pay-for-Success" model using Key Performance Indicators (KPI) for 5 years (see Appendix 5).

Formally, the sukuk-holders will be contributing at most 6.22% of the nominal value due under sukuk when the KPIs are successfully achieved at maturity. By comparison, they will be receiving at most the nominal value due under sukuk as agreed during sukuk issued when the KPIs are not achieved at maturity. Additionally, they are also encouraged to convert their investment into donation (Khazanah, 2015).

Student Number: 1247002

The sukuk program has a positive prospect amid relatively new. As the program focuses on increasing the quality of leadership and management, improving the education quality, maximizing student achievement and potential, as well as fostering the engagement of parents and stakeholders, it contributes to the betterment of the society especially towards the lower-income of the population who have less access to good education facilities (Syed Azman and Engku Ali, 2016). Education is a powerful driver of development and this sukuk program is seen as one of the ideal channels to arrest the poverty cycle and raise the population's living standards. Indirectly, the improvement of quality of education will be a plus point for students. Students who receive a proper education will be competent to perform their job leading to a higher productivity and better business performance in the long run. Hence, they will receive a better income following their significant contribution at work. Moreover, the presence of more productive workers also stimulates economic growth in the country. Accordingly, Malaysia's socioeconomic conditions will improve in the course of time.

#### **2.4 A Review of Empirical Literature: The Relationship Between Sukuk and the Socioeconomic Development**

Hitherto, the relationship between financial development and economic growth has been widely discussed. Among the great literary works of the nineteenth and twentieth centuries were written by Bagehot (1862-1877), Schumpeter (1912), Hicks (1969), as well as Grossman and Miller (1987). This was followed by few researchers including Levine (1997), Stievano (2004), Sunde (2013), and Stolbov (2013) who highlighted the significance of financial development and economic growth in the country. Typically, they demonstrated that there is a significant relationship between financial development and economic growth in the country. In particular, they demonstrated that a developed financial sector, which allocates its financial resources efficaciously, can bring about the development of economy. What is more, Nazir, Nawaz, and Gilani (2016) postulated that the robust growth in the stock market leads to the development of the economy.



Student Number: 1247002

There has been a quantum leap in the development of Islamic Finance industry over the past few decades. Subsequently, it captures the attention of many economists and journalists to vet the potential of this niche industry. Many scholars asserted that the presence of unique instruments in this space which mobilize and allocate monetary resources, empowers the industry to rival that of the conventional financial system especially in the aftermath of global financial crisis. Besides stimulating growth, Islamic banking is less vulnerable to a speculative bubble contrary to conventional banking (Hasan and Dridi, 2010). This is supported by Iqbal and Mirakhor (2011) who claimed that Islamic Finance industry is a fast-growing sector that is closely linked to the real economy.

Several researchers have scrutinized the impact of Islamic finance on the economic development. Echchabi and Azouzi (2015) attempted to empirically exhibit the significant relationship between Islamic finance development and economic growth in the UAE, through the employment of unit root tests and co-integration tests. However, they failed to prove so. By comparison, Imam and Kpodar (2015) discovered that Islamic banking contributes to economic growth. The study was conducted in 52 emerging economies in which 29 belongs to the Organisation of Islamic Countries (OIC) between 1990 and 2010 and averaged for 3-year intervals. Among variables used were initial GDP per capita, education, and inflation. This coincides with the research by Jobarteh and Ergec (2017) who evidenced a statistically significant relationship between Islamic Finance development and Turkey's economic growth in the short-term and long-term.

Grassa and Gazdar (2014) conducted a similar study in the GCC countries. The variables chosen to proxy Islamic Finance development were Islamic deposit money bank, private credit given by Islamic banks, and sukuk. Interestingly, the test revealed that the Islamic deposit to GDP ratio has a significant impact on economic growth through the OLS, GLS regression method, and panel data. Likewise, private credit to GDP ratio as an indicator of Islamic Finance development also illustrated a significant relationship on the economic growth. Nevertheless, the sukuk markets are observed to be insignificant in developing

Student Number: 1247002

the GCC countries. They subsequently deduced that the sukuk markets are relatively new and small, thus, sukuk issues do not contribute to the economic growth of the countries.

On the other hand, Echchabi, Abd Aziz, and Idriss (2016) were keen to investigate the potential of the emerging sukuk market to the economy. The study was conducted in sukuk issuing countries including Malaysia, Indonesia, China, United Kingdom, France and the GCC countries between 2005 and 2012. The variable used for sukuk was the volume of sukuk issuance. Meanwhile, GDP, GFCF, and trade activities were selected to proxy the economic condition. Interestingly, the result revealed that sukuk issues do not affect the economic growth in Saudi Arabia. This depicted that the kingdom still depends on its conventional financial market. In contrast to Saudi Arabia, sukuk played a pertinent role in the UAE's economic growth. There was also a statistically significant relationship between sukuk issues and the economic growth in Malaysia, Indonesia, and Turkey. Akin to Grassa and Gazdar (2014), it was deduced that the result emerged owing to the country's dependency on oil and gas incomes. Therefore, the economic growth in Saudi Arabia is not affected by sukuk issues.

In contrast, Godlewski, Turk-Ariss and Weill (2010) affirmed that the growing issuance of sukuk can jeopardize the organizations and subsequently hamper the economic development notably in the short run. They however suggested that the long run implications of using sukuk to finance development should be scrutinized. Salam, Fakhfekh, and Hachicha (2016) successfully evinced that there is a significant relationship between Malaysia's sukuk issuance and GDP, investment as well as labor force in the long run between 2004 and 2013. This consequently portrayed that sukuk bring about a significant value in Malaysia's economy.

Generally, Islamic Finance space is designed to conform with Shariah principles as well as to enhance the role of the state and individual, fair and just wealth

Student Number: 1247002

distribution, socioeconomic justice, and poverty eradication leading to the development of societies. Despite the mushrooming of literature pertaining to sukuk and economic growth nexus, to the researcher's best knowledge, there has been no empirical discussion on sukuk and social advancement nexus. Following the conventional financial system, Jalilian and Kirkpatrick (2001) empirically demonstrated that financial development helps to eradicate poverty, through the employment of panel data in 42 countries. Meanwhile, Dhrifi (2013) empirically examined the relationship between financial development and poverty eradication between 1990 and 2011 in 89 developed and developing economies. Evidently, there was a positive impact of financial development on poverty eradication, where countries with more developed financial systems are more likely to have lower poverty rates. Beck, Demirguc-Kunt, and Levine (2004) as well as Honohan (2007) also proposed that a developed financial sector contributes to reducing poverty and inequality.

Theoretically, Syed Azman and Engku Ali (2016) demonstrated that the emergence of Social Impact Bonds within the context of the Socially Responsible Investment (SRI) space in the global financial industry helps to address social issues such as homelessness and youth unemployment. To add more, the inception of SRI sukuk framework by the SC in Malaysia assists to combat poverty and socioeconomic insecurities. Despite the absence of empirical evidence, the researchers concurred that the Ihsan SRI sukuk program issued by Khazanah is an ideal model to tackle rising poverty and to ameliorate the living standards of Malaysia's hardcore poor. This is supported by Gregorio and Lee (2002) and Sirin (2005) who indicated a significant relationship between education and socioeconomic security.

## **CHAPTER 3 RESEARCH METHODOLOGY**

In this chapter, a number of activities are arranged in order to run the empirical tests effectively and to obtain fruitful empirical findings. One activity after another is undertaken in accordance with the objectives of the study to unravel the research question of this paper.

### **3.1 Type of Research**

Following the research question discussed, the researcher is determined to diagnose the relationship between sukuk issuance and the socioeconomic growth in Malaysia between Q1 2011 and Q4 2016. Accordingly, the researcher employs a causal research technique that involves an analysis of a phenomenon to justify the pattern of relationships between independent and dependent variables.

### **3.2 Sources of Data**

In this paper, secondary data are used to empirically investigate sukuk and the socioeconomic development in Malaysia nexus. Typically, secondary data are information or data that were gathered by other researchers for other purposes. Some information may not all be available from one source and can be gathered from several sources, of which they are available in written and electronic forms. The sources of secondary data emanate from official statistics by governments and various agencies, technical reports, academic journals, reference books as well as literature review articles (Blumberg, Cooper, and Schindler, 2011). Among the benefits of using secondary data are lower cost, faster, and easily accessed especially via the internet (Ghauri and Gronhaug, 2005). Meanwhile, some criticisms of employing secondary data are that they may be unreliable and obsolete (Saunders, Lewis, and Thornhill, 2009). Denscombe (2010) proposed that they may be irrelevant for other research questions.

The secondary data representing socioeconomic conditions in Malaysia are compiled from Bank Negara Malaysia and Department of Statistics Malaysia's websites. However, CPI, inflation rate, interest rate, unemployment rate, and labor force participation rate are only available in the form of monthly data.



Student Number: 1247002

Hence, the monthly data are converted into quarterly data through the employment of Microsoft Excel. This is feasible by calculating the average value for every quarter particularly January to March (Q1), April to June (Q2), July to September (Q3), and October to December (Q4) between 2011 and 2016. Meanwhile, the quarterly data of Malaysia's sukuk issuance are compiled from Bond Pricing Agency Malaysia. Overall, all secondary data are in numerical representations such as percentages, Index Points, and Malaysian currency (RM Million). The quantitative data are grouped in the form of tables and are published as appendices of this dissertation (see Appendix 6).

### **3.3 Research Method**

This research is descriptive in nature, thus, a correlational or regression analysis is employed to test the hypotheses and to describe the empirical findings. Taking a positivist and deductive approach, this study involves a systematical empirical investigation of the quarterly data particularly to evaluate the relationship between independent and dependent variables. Using the statistical procedures, the presence of correlation is detected when one variable is attributable to another variable (Brooks, 2014). Quantitative research is well-suited in this study as the researcher can empirically test the hypotheses, measure and critically analyze the data obtained, and accordingly be more objective with regards to research findings (Brooks, 2014).

The purpose of this research paper is to ascertain the sensitivity of Malaysia's economy and society to the growing sukuk issuance in the sample period. The empirical study consists of 24 observations in Malaysia between Q1 2011 and Q4 2016. A simple regression analysis using an econometric software known as EViews 9.0 is undertaken, where each of the socioeconomic dependent variables is run separately against independent variable. The researcher personally chooses EViews 9.0 as it allows an appropriate data analysis for different time frequencies. For simplicity, the researcher implements the concept of Ordinary

Student Number: 1247002

Least Squares (OLS)<sup>16</sup>. This technique, in particular, achieves the best fit line by minimizing the sum of residual squares (Brooks, 2014).

### 3.4 Data Characteristics

The variables to represent sukuk as well as to proxy the economic and social conditions in Malaysia are specified below:

- i. **Sukuk:** The indicator used to denote sukuk in this empirical study is Malaysia's sukuk issuance. This indicator is selected to analyze whether the infrastructure and development projects as well as the SRI projects financed through sukuk have indeed brought about an economic development and social growth in Malaysia throughout the sample period. The numerical data is regarded as an independent variable in this study.
- ii. **GDP Annual Growth Rate:** GDP has become the classic indicator to measure how fast the economy is growing. Commonly, the growth rate is positive when the economy is developing and is negative when the economy is heading to or in a recession. Theoretically, GDP comprises four different components namely personal consumption expenditures, business investment, government spending as well as net exports of goods and services (Amadeo, 2017). To begin with, some scholars disagree with the general view that sukuk are positively affecting the economic growth due to the fact that sukuk issues are only a small chunk of activities in the capital market. Notwithstanding, sukuk are evidently playing a catalytic role in developing Malaysia's Islamic Capital Market, of which Malaysia's Islamic Capital Market accounted for 59.56% of the Malaysian Capital Market in 2016 (SC, 2016). Moreover, the Malaysian capital market has increased to approximately RM2.84 trillion in 2016 and has successfully financed a number of national economic development projects (SC, 2016).

---

<sup>16</sup> Brooks (2014) justified that when the errors have zero mean, uncorrelated, and have constant variance, then the estimators determined by OLS will have a number of desirable properties, particularly **best linear unbiased estimators (BLUE)**.

Student Number: 1247002

Therefore, the GDP annual growth rate in Malaysia might be attributable to the growing sukuk issuance. Hence, it is undertaken as the first dependent variable.

- iii. **GFCF:** Gross fixed capital formation (GFCF) refers to the net increase in tangible assets and is an integral component of calculating GDP. Formally, GFCF comprises the spending on land improvements, machinery, and equipment, the construction of roads and railways, and commercial buildings. Capital formation basically allows a large-scale production and greater degree of specialization in the economy which therefore contributes to economic growth (Ongo and Vukenkeng, 2014). For this reason, GFCF can be an indicator to measure the economic growth in a country. As demonstrated, sukuk are issued against the underlying assets (mainly tangible assets) for specific investment projects. Subsequently, the growing sukuk issuance may have a significant impact on Malaysia's GFCF. Accordingly, GFCF is chosen as the second dependent variable.
- iv. **CPI:** CPI is a crucial indicator of the economic growth. In particular, CPI as an inflation indicator, is designed to measure the changes in the prices of a basket of consumer goods and services (ONS, 2013). Generally, CPI is a vital economic indicator for investors in global financial system, of which the current state of economy affects the behavior of investors whether to invest or not. It would therefore be interesting to examine whether the growing sukuk issuance can bring about a steady CPI rather than an excessive CPI in Malaysia. Hence, CPI is undertaken as the third dependent variable to represent Malaysia's economic condition.
- v. **Inflation rate:** Typically, inflation rate provides us an aggregate measure of the price changes occurring for a number of different products and services (Mishkin, 2004). Xian et al. (2015), for instance, have investigated the impact of inflation rate on sukuk and conventional bonds in Malaysia. On the contrary, this dissertation aims to empirically investigate the impact of sukuk to inflation rate in Malaysia over the study period. Hence, inflation

Student Number: 1247002

rate is undertaken as the fourth dependent variable to proxy Malaysia's economic condition.

- vi. **Interest rate:** The movement of interest rate can have a significant impact on conventional bonds as well as sukuk. A lower interest rate is generally preferable, the presence of which makes it cheaper to borrow and encourages spending and investment. In particular, the market participants enjoy cheaper borrowing costs and lower mortgage interest payments. Subsequently, this contributes to higher aggregate demand and a positive economic growth (Pettinger, 2016). Thus, it demonstrates that macroeconomic factors do influence the performance of conventional bonds and sukuk. Conversely, this empirical study attempts to showcase the impact of rapid sukuk issuance to Malaysia's interest rate in the sample period. Consequently, interest rate is the fifth dependent variable to proxy Malaysia's economic condition.
- vii. **Unemployment rate:** Unemployment rate is the percentage of labor force that is jobless. When the economy stumbles and jobs are limited, the unemployment rate increases. Subsequently, high unemployment jeopardizes the economy and society, by affecting the social systems and spawning hardship and poverty (McClelland and Macdonald, 1998). The main objective of the Ihsan SRI sukuk program is to improve the quality of education in the government schools. The sukuk program, if successful, generates a positive impact on the labor force and productivity besides minimizing the unemployment rate especially when the economy expands. Those educated workers in Malaysia's labor market who were once in this program will have the potential of receiving higher payment contrary to the uneducated workers. This consequently contributes to the social development in Malaysia as propagated by Wambugu (2011). Hence, it is reasonable to choose unemployment rate as the sixth dependent variable to denote Malaysia's social condition.



Student Number: 1247002

- viii. **Labor force participation rate:** Akin to unemployment rate, labor force participation rate is selected to proxy Malaysia's social condition in this empirical study. It is the percentage of the population that is working or looking for jobs. In particular, it helps to assess overall labor market conditions (DiCecio et al., 2008). With the ongoing MRT projects and efforts in improving the quality of education in the government schools, Malaysia's social development is set to grow to a higher level. Upon the completion of the MRT projects and other ETP projects, job opportunities will be aplenty and correspondingly, labor force participation rate will increase. Further, the success of the SRI sukuk program would render better career opportunities to the students. This illustrates that the seventh dependent variable is relevant to this empirical study.

### 3.5 Empirical Model

The simple regression analysis depicts a linear relationship between  $x$  (independent variable) and  $y$  (dependent variable). Meanwhile, epsilon is the random component between  $x$  and  $y$ .

The baseline regression is as follows:

$$y_t = \beta_0 + \beta_1 x_t + \varepsilon_t$$

Based on the indicators chosen, the hypotheses are stipulated as follows:

Hypothesis 1:

( $H_a$ ): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's Gross Domestic Product (GDP) annual growth rate.*

Hypothesis 2:

( $H_a$ ): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's Gross Fixed Capital Formation (GFCF).*

Hypothesis 3:



Student Number: 1247002

(H<sub>a</sub>): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's Consumer Price Index (CPI).*

Hypothesis 4:

(H<sub>a</sub>): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's inflation rate.*

Hypothesis 5:

(H<sub>a</sub>): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's interest rate.*

Hypothesis 6:

(H<sub>a</sub>): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's unemployment rate.*

Hypothesis 7:

(H<sub>a</sub>): *There is a statistically significant relationship between Malaysia's sukuk issuance and Malaysia's labor force participation rate.*

The hypotheses are then tested using the following equations:

$$GDP_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

$$GFCF_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

$$CPI_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

$$I_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

$$R_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

$$UR_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

$$LF_t = \beta_0 + \beta_1 S_t + \epsilon_t$$

Student Number: 1247002

Where S represents Sukuk Issuance, GDP represents GDP Annual Growth Rate, GFCF denotes Gross Fixed Capital Formation, CPI signifies Consumer Price Index, I depicts Inflation Rate, R portrays Interest Rate, UR indicates Unemployment Rate, and LF illustrates Labor Force Participation Rate. It is instructive to be informed that the dependent variable is regressed separately on the independent variable plus a constant, and the significance of the variable in the regressions is examined. Throughout the hypotheses testing, 1%, 5%, and 10% significance level are assumed.

### **3.6 Reliability and Validity of the Research**

The principles of reliability and validity are the bedrock of the scientific research method. Reliability, on one hand, delineates the accuracy and precision of the scientific procedures in which any subsequent experiments must produce similar outcomes that are very alike to the previous experiment, under similar conditions. This adds value to the findings and subsequently a wider scientific community will be accepting the findings. Validity, on the other hand, verifies the credibility of the findings. Moreover, this principle ensures that the experiment has addressed all requirements of the scientific research method (Blumberg, Cooper, and Schindler, 2011). One of the ways to safeguard the reliability and validity of the empirical research is to compile the quarterly data from different entities including RAM Ratings, Bond Pricing Agency Malaysia, Bank Negara Malaysia, and Department of Statistics Malaysia. Institutions such as RAM Ratings, Bond Pricing Agency Malaysia, and Bank Negara Malaysia are actively engaged in the Malaysian sukuk market since the nascent stage. Meanwhile, the Department of Statistics Malaysia is the authority that is responsible for providing statistical information pertaining to Malaysia's economy and society. Consequently, it can be affirmed that the empirical findings of this paper are credible, unbiased, and more likely to be accepted by the scientific community.

Student Number: 1247002

### **3.7 Limitations of the Study**

Estimating the relationship between sukuk issuance and Malaysia's socioeconomic development between Q1 2011 and Q4 2016 is subject to several shortcomings. To begin with, the methodology employed is a basic statistical method using EViews 9.0. Generally, the regression results derived from this econometric software assists the researcher in deciding whether to reject or to accept the null hypothesis. However, this empirical test is not capable of proving that the sukuk issuance is causing Malaysia's economic and social growth to expand. An advanced econometric method is required to generate a deeper analysis on the relationship between sukuk and Malaysia's economic and social development over the year of 2011 to 2016. Besides, this study covers only one country. Subsequently, the results cannot be generalized to other jurisdictions. In addition, the present study uses quarterly data between 2011 and 2016. The research is more meaningful if it incorporates a longer sample period. For example, the sample period which incorporates the period of before, during, and after the global financial crisis is taken into consideration to test the validity of the hypotheses. This allows more observation to be taken into account and enhances the quality of the empirical findings. However, it cannot be realized owing to the time constraints and the paucity of data. Moreover, the empirical findings are more definitive if the test consists of education to denote Malaysia's social condition. In particular, there is a scrutiny of the relationship between sukuk and education (e.g. the literacy rate in the Khazanah's Trust School Program) over the sample period. Due to the missing piece of quarterly data for the education aspect between 2011 and 2016, it cannot be deployed as one of dependent variables in this empirical study.

## **CHAPTER 4 DATA ANALYSIS**

### **4.1 Introduction**

This chapter presents the regression results derived from a simple statistical method using EViews 9.0. The quarterly data of independent and dependent variables between 2011 and 2016 are compiled and subsequently processed to address the research question posed in Chapter 1, that is to empirically investigate the relationship between the sukuk issuance and the development of Malaysia's economy and society between Q1 2011 and Q4 2016.

Section 4.2 covers the analysis of descriptive statistics including the values of mean, median, maximum, minimum, standard deviation, skewness, kurtosis, Jarque-Bera, and probability for the variables. This enables readers to have an understanding on the data set in a logical manner. In Section 4.3, the chapter proceeds with the critical analyses on the inferential statistics, of which to evaluate the statistically significant relationship between independent and dependent variables based on the regression results. To determine the link of independent and dependent variables, the dependent variables are regressed separately against the independent variable, one after another using the equation specified in Chapter 3. Finally, section 4.4 ends this chapter by providing readers with the overall discussion of the regression results.

Student Number: 1247002

**4.2 Main Result of Descriptive Statistics**

	SUKUK	GDP	GFCF	CPI	I	R	UR	LF
Mean	53841.79	5.112500	62539.08	108.9417	2.386111	3.069444	3.130556	66.62778
Median	52673.00	5.100000	65134.50	109.1667	2.466667	3.000000	3.083334	67.45000
Maximum	100178.0	6.500000	74501.00	116.4000	3.466667	3.250000	3.500000	68.93333
Minimum	15620.00	4.000000	45936.00	102.1667	0.666667	2.750000	2.733333	64.16667
Std. Dev.	22276.52	0.735032	7786.753	4.446104	0.829581	0.140450	0.197794	1.519269
Skewness	0.330401	0.350166	-0.736050	0.131135	-0.289639	0.099985	0.152303	-0.388749
Kurtosis	2.428365	2.194233	2.472301	1.667355	1.867881	2.306852	2.721162	1.661095
Jarque-Bera	0.763426	1.139726	2.445546	1.844729	1.617256	0.520442	0.170536	2.397169
Probability	0.682691	0.565603	0.294413	0.397578	0.445469	0.770881	0.918266	0.301621

**Table 4.1: Results of Descriptive Statistics**

Variable	Abbreviation	Unit	Sample period
Sukuk issuance	S	RM Million	Q1 2011 to Q4 2016
Gross Domestic Product (GDP) Annual Growth Rate	GDP	%	Q1 2011 to Q4 2016
Gross Fixed Capital Formation	GFCF	RM Million	Q1 2011 to Q4 2016
Consumer Price Index	CPI	Index Points	Q1 2011 to Q4 2016
Inflation Rate	I	%	Q1 2011 to Q4 2016
Interest Rate	R	%	Q1 2011 to Q4 2016
Unemployment Rate	UR	%	Q1 2011 to Q4 2016
Labor Force Participation Rate	LF	%	Q1 2011 to Q4 2016

**Table 4.2: Abbreviations, Units, and Sample Period for Variables**



Student Number: 1247002

Table 4.1 demonstrates the descriptive statistics and analysis results using EViews 9.0. There are 24 observations in total, with data spanning from Q1 2011 to Q4 2016. Among the variables chosen are Malaysia's sukuk issuance (S), Gross Domestic Product (GDP) Annual Growth Rate (GDP), Gross Fixed Capital Formation (GFCF), Consumer Price Index (CPI), Inflation Rate (I), Interest Rate (R), Unemployment Rate (UR), and Labor Force Participation Rate (LF). The empirical finding constitutes the values of mean, median, maximum, minimum, standard deviation, skewness, kurtosis, Jarque-bera, and probability for each of the variables between Q1 2011 and Q4 2016 (see Appendix 7).

Firstly, Table 4.1 depicts the average values (also known as mean) of the variables. The mean value for Malaysia's sukuk issuance (S) is 53841.79, GDP Annual Growth Rate (GDP) is 5.1125, Gross Fixed Capital Formation (GFCF) is 62539.08, Consumer Price Index (CPI) is 108.9417, Inflation Rate (I) is 2.386111, Interest Rate (R) is 3.069444, Unemployment Rate (UR) is 3.130556, and Labor Force Participation Rate (LF) is 66.62778. Next, the median value for Malaysia's sukuk issuance (S) is 52673, GDP Annual Growth Rate (GDP) is 5.1, Gross Fixed Capital Formation (GFCF) is 65134.50, Consumer Price Index (CPI) is 109.1667, Inflation Rate (I) is 2.466667, Interest Rate (R) is 3, Unemployment Rate (UR) is 3.083334, and Labor Force Participation Rate (LF) is 67.45. Throughout the sample period, the highest value obtained for Malaysia's sukuk issuance (S) is 100178, GDP Annual Growth Rate (GDP) is 6.5, Gross Fixed Capital Formation (GFCF) is 74501, Consumer Price Index (CPI) is 116.4, Inflation Rate (I) is 3.466667, Interest Rate (R) is 3.25, Unemployment Rate (UR) is 3.5, and Labor Force Participation Rate (LF) is 68.93333. During the study period, the biggest fall recorded for Malaysia's sukuk issuance (S) is 15620, GDP Annual Growth Rate (GDP) is 4, Gross Fixed Capital Formation (GFCF) is 45936, Consumer Price Index (CPI) is 102.1667, Inflation Rate (I) is 0.666667, Interest Rate (R) is 2.75, Unemployment Rate (UR) is 2.733333, and Labor Force Participation Rate (LF) is 64.16667. Meanwhile, the standard deviation for Malaysia's sukuk issuance (S) is 22276.52, GDP Annual Growth Rate (GDP) is 0.735032, Gross Fixed Capital

Student Number: 1247002

Formation (GFCF) is 7786.753, Consumer Price Index (CPI) is 4.446104, Inflation Rate (I) is 0.829581, Interest Rate (R) is 0.140450, Unemployment Rate (UR) is 0.197794, and Labor Force Participation Rate (LF) is 1.519269. In addition, the value of skewness and kurtosis for each variable is also recorded in Table 4.1. Generally, skewness justifies how symmetrical the distribution is. The skewness value of zero denotes a normal distribution, and negative skewness values demonstrate that the data are skewed left whilst positive skewness values signify that the data are skewed right (Brooks, 2014). In this empirical finding, the value of skewness for Malaysia's sukuk issuance (S) is 0.330401 (positively skewed), GDP Annual Growth Rate (GDP) is 0.350166 (positively skewed), Gross Fixed Capital Formation (GFCF) is -0.736050 (negatively skewed), Consumer Price Index (CPI) is 0.131135 (positively skewed), Inflation Rate (I) is -0.289639 (negatively skewed), Interest Rate (R) is 0.099985 (positively skewed), Unemployment Rate (UR) is 0.152303 (positively skewed), and Labor Force Participation Rate (LF) is -0.388749 (negatively skewed). Thus, the distribution of Malaysia's sukuk issuance (S), GDP Annual Growth Rate (GDP), Consumer Price Index (CPI), Interest Rate (R), and Unemployment Rate (UR) has a long right hand tail and most of their data are bunched on the left. Subsequently, their mean and median values are greater than their mode values. By comparison, the distribution of Gross Fixed Capital Formation (GFCF), Inflation Rate (I), and Labor Force Participation Rate (LF) has a long left hand tail and most of their data are bunched on the right. Hence, their mode values are greater than their median and mean values. In contrast, kurtosis measures the peakedness or flatness of the distribution. Typically, the kurtosis with the value of 3 depicts that the data shape matches the normal distribution (also known as mesokurtic distribution), whilst the value lesser than 3 for kurtosis indicates a flatter distribution (also known as platykurtic distribution) and the value greater than 3 indicates a distribution more peaked distribution (also known as leptokurtic distribution) (Brooks, 2014). Table 4.1 shows that the kurtosis value for Malaysia's sukuk issuance (S) is 2.428365, GDP Annual Growth Rate (GDP) is 2.194233, Gross Fixed Capital Formation (GFCF) is

Student Number: 1247002

2.472301, Consumer Price Index (CPI) is 1.667355, Inflation Rate (I) is 1.867881, Interest Rate (R) is 2.306852, Unemployment Rate (UR) is 2.721162, and Labor Force Participation Rate (LF) is 1.661095. Due to the kurtosis value of all variables is lesser than 3, they consequently have platykurtic distribution. Accordingly, the distribution of the variables is less peaked in the mean and has slender tails. Additionally, Table 4.1 manifests the value derived from Jarque-Bera test. Jarque-Bera statistics technically indicates the normality of data especially large data sets, by measuring the difference of the skewness and kurtosis of the series with those from the normal distribution. This test aims to have a normal distribution with the skewness value of zero and kurtosis value of three (Brooks, 2014). Table 4.1 reports that the value of Jarque-Bera for Malaysia's sukuk issuance (S) is 0.763426, GDP Annual Growth Rate (GDP) is 1.139726, Gross Fixed Capital Formation (GFCF) is 2.445546, Consumer Price Index (CPI) is 1.844729, Inflation Rate (I) is 1.617256, Interest Rate (R) is 0.520442, Unemployment Rate (UR) is 0.170536, and Labor Force Participation Rate (LF) is 2.397169. Lastly, the value of probability of Jarque-bera statistic exceeding the observed value under the null hypothesis of a normal distribution for each variable is also stipulated. The probability value for Malaysia's sukuk issuance (S) is 0.682691, GDP Annual Growth Rate (GDP) is 0.565603, Gross Fixed Capital Formation (GFCF) is 0.294413, Consumer Price Index (CPI) is 0.397578, Inflation Rate (I) is 0.445469, Interest Rate (R) is 0.770881, Unemployment Rate (UR) is 0.918266, and Labor Force Participation Rate (LF) is 0.301621. Hence, the p-value of Jarque-bera statistics for all variables is not significant at 1%, 5%, and 10% level. Consequently, we fail to reject that the null hypothesis that the residuals are normally distributed. As such, the histogram of the variables is bell-shaped and correspondingly the assumption of a good regression line is fulfilled. This also suggests that the inferences derived from the coefficient estimates throughout this empirical study are presumably accurate.

Student Number: 1247002

### 4.3 Results Analysis

Table 4.3 summarizes the regression results of the dependent variables which were run separately against the independent variable (see Appendix 8 to Appendix 14).

Dependent Variable	Constant	Coefficient	t-statistic	p-value	R-squared	F-statistic	Prob (F-statistic)
GDP Annual Growth Rate	4.47	1.19	1.8122*	0.0836*	0.1299	3.2840*	0.0836*
Gross Fixed Capital Formation	68711.52	-0.11	-1.6284	0.1177	0.1076	2.6516	0.1177
Consumer Price Index	114.63	-0.000106	-2.9263***	0.0078***	0.2802	8.5634***	0.0078***
Inflation Rate	2.47	-1.47	-0.1854	0.8546	0.0016	0.0344	0.8546
Interest Rate	3.20	-2.51	-2.0390*	0.0536*	0.1589	4.1577*	0.0536*
Unemployment Rate	3.36	-4.23	-2.5432**	0.0185**	0.2272	6.4679**	0.0185**
Labor Force Participation Rate	67.65	-1.89	-1.3536	0.1896	0.0769	1.8324	0.1896

**Table 4.3: Regression Results**

*Note: The figure in asterisks \* denotes significant at 10%, \*\* denotes significant at 5%, and \*\*\* denotes significant at 1% respectively.*

#### 4.3.1 GDP Annual Growth Rate

The first dependent variable in this study is GDP Annual Growth Rate. Based on the first regression result, the equation generated is:

$$GDP_t = 4.47 + 1.19S_t$$

Following ordinary least square estimates, the t-statistics of dependent variable selected (Malaysia's GDP Annual Growth Rate) is 1.8122. Thus, the t-statistics is significant at 10% significance level. Furthermore, the p-value is 0.0836. Since the p-value lies between 0.05 and 0.10, it has subsequently achieved the conventional threshold levels of statistical significance proving that there is a



Student Number: 1247002

weak evidence against the null hypothesis in favor of the alternative. From the empirical result, the value of R-squared obtained is 0.1299. This denotes that a small proportion approximately 12.99% of the variation in Malaysia's GDP Annual Growth Rate can be explained by Malaysia's sukuk issuance. Meanwhile, 87.01% of variation in Malaysia's GDP Annual Growth Rate can be apportioned by residuals and other variables than Malaysia's sukuk issuance. Therefore, the low value of R-squared indicates that there are other greater drivers in GDP besides Malaysia's sukuk issuance in the sample period. Furthermore, the value of f-statistics derived from the regression test is 3.2840 and the probability for the f-statistics is 0.0836, which are significant at 10% level. Hence, there is adequate evidence to accept Hypothesis 1. Following the equation generated from the first regression test, it illustrates that an increase in sukuk issues by RM1 Million leads to an increase in the GDP annual growth rate in Malaysia by 1.19%. Subsequently, it depicts the sensitivity of Malaysia's GDP annual growth rate towards the sukuk issuance over the study period.

#### 4.3.2 Gross Fixed Capital Formation

The second dependent variable is Gross Fixed Capital Formation (GFCF). Based on the second regression result, the equation generated is:

$$GFCF_t = 68711.52 - 0.11S_t$$

Following ordinary least square estimates, the t-statistics of dependent variable selected (Malaysia's Gross Fixed Capital Formation) is -1.6284. Technically, it is not significant at any significance level. Based on the empirical finding, the p-value is 0.1177. Since the probability is greater 0.10, there is no evidence against the null hypothesis. Following the empirical result, the value of R-squared is 0.1076. This indicates that only a small proportion approximately 10.76% of the variation in Malaysia's Gross Fixed Capital Formation can be justified by Malaysia's sukuk issuance. Thus, the low value of R-squared denotes that there are other major forces exerting on GFCF aside from Malaysia's sukuk issuance over the sample period. Moreover, the value of f-statistics derived from the regression test is 2.6516 and the probability obtained for the f-statistics is



Student Number: 1247002

0.1177, which are not significant at any level. Therefore, it reinforces the statement that the null hypothesis failed to be rejected, where there is no statistically significant relationship between Malaysia's sukuk issuance and Malaysia's GFCF throughout the study period. Consequently, the sensitivity of GFCF towards the growing sukuk issuance in Malaysia over the study period failed to be highlighted in this study.

#### 4.3.3 Consumer Price Index

The third dependent variable is Consumer Price Index (CPI). Following the third regression result, the equation generated is:

$$CPI_t = 114.63 - 0.000106S_t$$

Based on ordinary least square estimates, the t-statistics of dependent variable chosen (Malaysia's Consumer Price Index) is -2.9263. Interestingly, it is very significant at 1% significance level. Moreover, Table 4.3 shows that the p-value is 0.0078. Since the p-value lies between 0.001 and 0.01, CPI is highly significant indicating that there is a strong evidence against the null hypothesis in favor of the alternative. In addition, the value of R-squared is 0.2802. This suggests that a modest proportion approximately 28.02% of the variation in Malaysia's Consumer Price Index can be explained by Malaysia's sukuk issuance. The rest of the variation of approximately 71.98% in Malaysia's Consumer Price Index can be attributed by residuals and other variables than Malaysia's sukuk issuance. Indirectly, the reasonable value of R-squared suggests that Malaysia's sukuk issuance plays a significant role on CPI during the sample period. In addition, the value of the f-statistics derived from the regression test is 8.5634 and the p-value for the f-statistics is 0.0078, which are very significant at 1% level. Hence, it entails the sensitivity of CPI towards Malaysia's sukuk issuance throughout the sample period and subsequently Hypothesis 3 is accepted. Following the equation generated from the third regression test, it depicts that an increase in sukuk issues by RM1 Million leads to a decrease in CPI by 0.000106 Index Points. Consequently, this negative correlation evidences that sukuk are somewhat associated with Malaysia's CPI during the sample period.

Student Number: 1247002

#### 4.3.4 Inflation Rate

The fourth dependent variable is Inflation Rate. Following the fourth regression result, the equation generated is:

$$I_t = 2.47 - 1.47S_t$$

Following ordinary least square estimates, the t-statistics of dependent variable selected (Malaysia's Inflation Rate) is -0.1854. Therefore, the t-statistics of inflation rate in this study is not significant at 1%, 5%, and 10% significance level. Based on the empirical finding, the p-value acquired is 0.8546. Since the probability is bigger than 0.10, the data is very much consistent with the null hypothesis that there is no statistically relationship between sukuk and inflation rate in Malaysia between 2011 and 2016. Furthermore, the value of R-squared is 0.0016. This subsequently denotes that a very small proportion approximately 0.16% of the variation in Malaysia's inflation rate can be explained by Malaysia's sukuk issuance. The low value of R-squared indicates that Malaysia's sukuk issuance is affecting inflation rate at a very minimal rate between Q1 2011 and Q4 2016. Thus, an adequate evidence that there is a significant relationship between sukuk and inflation rate throughout the sample period failed to be presented in this empirical study. Meanwhile, the value of the f-statistics is 0.0344 and the p-value for the f-statistics is 0.8546, which are not significant at any level. Hence, it reinforces the statement that we fail to reject the null hypothesis that there is no statistically significant relationship between Malaysia's sukuk issuance and Malaysia's inflation rate between Q1 2011 and Q4 2016. Subsequently, the sensitivity of Malaysia's inflation rate towards the sukuk issuance throughout the study period failed to be empirically demonstrated in this study.

#### 4.3.5 Interest Rate

The fifth dependent variable is Interest Rate. According to the fifth regression result, the equation generated is:

$$R_t = 3.20 - 2.51S_t$$

Student Number: 1247002

From ordinary least square estimates, the t-statistics of dependent variable selected (Malaysia's Inflation Rate) is -2.0390. Hence, it lies in the rejection region and is significant at 10% significance level. Based on Table 4.3, the p-value is 0.0536. Since the probability lies between 0.05 and 0.10, interest rate is marginally significant denoting that there is a weak evidence against the null hypothesis in favor of the alternative. Moreover, the value of R-squared is 0.1589. This demonstrates that a small proportion of approximately 15.89% of the variation in Malaysia's interest rate could be attributable to Malaysia's sukuk issuance. The rest of variation which is about 84.11% in Malaysia's interest rate can be apportioned by residuals and other variables than Malaysia's sukuk issuance. Subsequently, this numerical value indicates that interest rate is modestly affected by Malaysia's sukuk issuance throughout the study period. Meanwhile, the value of the f-statistics derived from the regression test is 4.1577 and the p-value for the f-statistics is 0.0536, which are significant at 10% level. Subsequently, it conveys that Hypothesis 5 should not be rejected. Following the equation generated from the fifth regression test, it portrays that an increase in sukuk issues by RM1 Million leads to a decrease in interest rate by 2.51%. Consequently, it highlights the inverse correlation between sukuk and interest rate in Malaysia between Q1 2011 and Q4 2016.

#### 4.3.6 Unemployment Rate

The sixth dependent variable is Unemployment Rate. Following the sixth regression result, the equation generated is:

$$UR_t = 3.36 - 4.23S_t$$

Following ordinary least square estimates, the t-statistics of dependent variable selected (Malaysia's Unemployment Rate) is -2.5432, which is significant at 5% significance level. Based on the above statistics, the p-value is 0.0185. Since the p-value lies between 0.01 and 0.05, there is a moderate evidence against the null hypothesis in favor of the conjecture. Based on the empirical result, the value of R-squared is 0.2272. This exhibits that a substantial portion approximately 22.72% of the variation in Malaysia's unemployment rate can be elucidated by

Student Number: 1247002

Malaysia's sukuk issuance, the presence of which proves that Malaysia's sukuk issuance has a significant role in Malaysia's unemployment rate during the study period. Meanwhile, the rest of variation, approximately 77.28%, in Malaysia's unemployment rate can be justified by residuals and other variables than Malaysia's sukuk issuance. Additionally, the value of the f-statistics is 6.4679 whilst the p-value for the f-statistics is 0.0185, which are significant at 5% level. Hence, it reinforces the statement that we can reject the null hypothesis that there is no statistically significant relationship between Malaysia's sukuk issuance and Malaysia's unemployment rate between Q1 2011 and Q4 2016. Technically, Hypothesis 6 should be accepted. Following the equation generated from the sixth regression test, it depicts that an increase in sukuk issues by RM1 Million leads to a decrease in unemployment rate by 4.23%. Therefore, this study witnesses a negative correlation between sukuk and the unemployment rate in Malaysia throughout the study period.

#### **4.3.7 Labor Force Participation Rate**

The final dependent variable is Labor Force Participation Rate. According to the seventh regression result, the equation generated is:

$$LF_t = 67.65 - 1.89S_t$$

Following ordinary least square estimates, the t-statistics of dependent variable selected (Malaysia's Labor Force Participation Rate) is -1.3536. This subsequently conveys that it does not lie in the rejection region and is not significant at 1%, 5%, and 10% significance level. Based on Table 4.3, the p-value is 0.1896. Indirectly, it promotes an unfavorable trend with no evidence against the null hypothesis. Therefore, the null hypothesis failed to be rejected in this study. Furthermore, the value of R-squared obtained is 0.0769. This depicts that only a small proportion around 7.69% of the variation in Malaysia's labor force participation rate can be explained by Malaysia's sukuk issuance. Hence, the low value of R-squared signifies an insufficient evidence because there are other major contributing factors on the labor force participation rate besides Malaysia's sukuk issuance during the study period. Besides, the value of the f-statistics is



Student Number: 1247002

1.8324 and the probability for the f-statistics is 0.1896, which are not significant at any level. Thus, it strengthens the statement that we fail to reject the null hypothesis that there is no statistically significant relationship between Malaysia's sukuk issuance and Malaysia's labor force participation rate for the period Q1 2011 to Q4 2016.

#### **4.4 Discussion of Research Findings**

The first dependent variable in this study is GDP annual growth rate. From ordinary least square estimates, it reveals a statistically significant relationship between sukuk and GDP annual growth rate in Malaysia over the study period at 10% significance level. This contradicts with Favara (2003) who proclaimed that the growth in the financial sector has no impact on GDP growth. On the contrary, the empirical result is consistent with Fink et al. (2006) who demonstrated the significant relationship between stock or debt market growth and GDP growth. Moreover, several researchers inferred that sukuk are instrumental in bringing about positive GDP growth in Malaysia such as Salam, Fakfekh, and Hachicha (2016) as well as Echchabi, Abd Aziz, and Idriss (2016). As GDP is the classic example of the economic indicator of the country, this subsequently evidences that sukuk play a pertinent role in Malaysia's economy between Q1 2011 and Q4 2016.

The second dependent variable is GFCF. Based on the second regression result, there is a non-significant relationship between sukuk and GFCF in Malaysia over the span of Q1 2011 to Q4 2016. The empirical result is consistent with Iheanacho (2016) who demonstrated the non-significant relationship between financial development and GFCF in Nigeria. By comparison, Echchabi, Abd Aziz, and Idriss (2016) revealed the statistically significant relationship between sukuk and GFCF in Malaysia. Meanwhile, the third dependent variable is CPI. Surprisingly, CPI is the only economic indicator that is very significant at 1% significance level and has a negative correlation with Malaysia's sukuk issuance. This coincides with Ozturk and Karagoz (2012) who demonstrated that the growth in credit to private sector in Turkey contributed to the decrease in



Student Number: 1247002

inflation of the country. This is also supported by Grassa and Said (2013) who asserted that high inflation impedes the development of the economy. Therefore, the empirical result explains that sukuk have a significant relationship with Malaysia's CPI throughout the study period.

The fourth dependent variable is inflation rate. Following ordinary least square estimates, the empirical result illustrates the insignificant relationship between sukuk and inflation rate in Malaysia between Q1 2011 and Q4 2016. This is consistent with a research by Saad, Haniff, and Ali (2016), of which they asserted that there should be an insignificant relationship between sukuk and inflation rate owing to the proscription of Riba. On the other hand, the fifth dependent variable is interest rate. The fifth regression result evidences that interest rate is significant at 10% significance level and has an inverse correlation with Malaysia's sukuk issuance throughout the sample period. Grassa and Said (2013) have discussed that lower interest rates are more advantageous to the economy. This theory also tallies with Keynesian economics (Jahan, Mahmud, and Papageorgiou, 2014). This subsequently denotes that sukuk have a significant relationship with the movement of interest rate in Malaysia during the sample period.

Next, the sixth dependent variable is unemployment rate. The sixth empirical result portrays that the unemployment rate is significant at 5% significance level and has an inverse correlation with Malaysia's sukuk issuance. Likewise, Shabbir et al. (2012) evidenced a stable long-run relationship between financial development and unemployment rate in Pakistan. Similarly, Mbu (no date) evidenced the statistically significant inverse relationship between sukuk and unemployment rate in Saudi Arabia<sup>17</sup>. Finally, the seventh dependent variable is labor force participation rate. Following ordinary least square estimates, there is a non-significant relationship between sukuk and Malaysia's labor force participation rate between Q1 2011 and Q4 2016. In contrast, Pagano and Pica

---

<sup>17</sup> In contrast to this dissertation, the researcher undertook unemployment rate to proxy economic condition in Saudi Arabia.

Student Number: 1247002

(2011) observed that financial development is correlated with employment growth in the non-OECD countries. This is supported by Salam, Fakfekh, and Hachicha (2016) who successfully depicted that the labor force in Malaysia is driven by sukuk using the Johansen test<sup>18</sup>.

In summary, only the t-statistics of Malaysia's GDP annual growth rate, CPI, interest rate and unemployment rate are significant. Overall, only Malaysia's GDP annual growth rate, CPI, interest rate, and unemployment rate successfully obtained the p-value that is lesser than 0.10. Consequently, we are capable of rejecting the null hypothesis when taking GDP annual growth rate, CPI, interest rate and unemployment rate into account. It also suggests that there is a significant impact of Malaysia's sukuk issuance on Malaysia's GDP annual growth rate, CPI, interest rate, and unemployment rate between Q1 2011 and Q4 2016. On top of that, only GDP annual growth rate, CPI, interest rate, and unemployment rate successfully obtained a substantial value of R-squared contrary to the rest of variables. This subsequently conveys a stronger evidence between sukuk and GDP annual growth rate, CPI, interest rate, and unemployment rate in contrast to other dependent variables.

Bearing in mind that GDP annual growth rate, CPI, and interest rate were selected to proxy Malaysia's economic condition whilst unemployment rate was selected to denote Malaysia's social condition, *ceteris paribus*, it is fair to deduce that sukuk play a significant role in Malaysia's economy and society throughout the study period. Notwithstanding, a stronger empirical evidence pursuant to the sensitivity of Malaysia's economy and society towards sukuk issues throughout the study period failed to be presented, following insignificant results recorded between sukuk and GFCF, inflation rate as well as labor force participation rate.

The differences in the empirical results such as Salam, Fakfekh, and Hachicha (2016) that successfully depicted the significant relationship between sukuk and labor force as well as Echchabi, Abd Aziz, and Idriss (2016) that revealed the

---

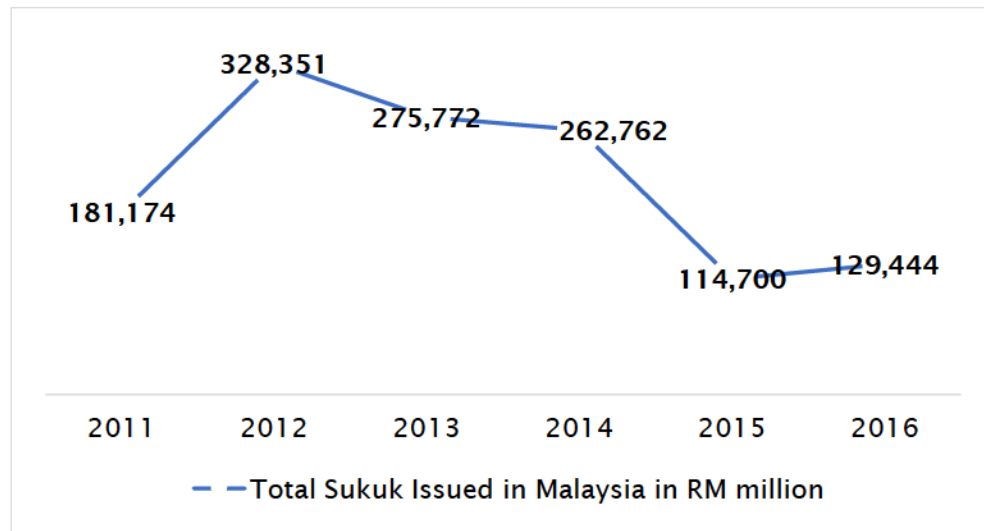
<sup>18</sup> Contrary to this empirical study, the researchers deemed labor force as an economic indicator in Malaysia.

Student Number: 1247002

statistically significant relationship between sukuk and GFCF in Malaysia might occur due to the fact that the finding of the study is also governed by the sample period undertaken by the researchers (Goaied and Sassi, 2011). For instance, Salam, Fakfekh, and Hachicha (2016) have undertaken the study period between 2004 and 2013 whilst Echchabi, Abd Aziz, and Idriss (2016) have chosen the sample period of 2005 to 2012. This depicts that the study period chosen by the researchers are longer contrary to the current study. Perhaps with the incorporation of a longer sample period by the respective researchers, it contributed to their accomplishment to showcase the sensitivity of sukuk to GFCF and labor force in Malaysia. This is underpinned by Brooks (2014) who purported that an ideal sample size also plays a significant role in generating an accurate inference of the coefficient estimates. Theoretically, one may argue the insignificant result recorded for GFCF partly arose because Malaysia has embraced a new asset class to back sukuk rather than merely deploy tangible assets.

It can also be argued, for instance, by associating the empirical findings with a research by Colombage (2009) who expounded that the relationship between financial development and economic growth is dependent on the circumstances of the jurisdiction. Note that sukuk are not operating in vacuum, thus, the slowdown in the global financial system in 2015 could have a significant impact on the overall sukuk market. Furthermore, by looking at Malaysia's sukuk growth trajectory between 2011 and 2016, the country has been reducing its contribution in raising sukuk especially between 2013 and 2015. In 2015, BNM was also determined to move away from raising short-dated sukuk in the Malaysian market. This subsequently created a turmoil in the global sukuk market as Malaysia has been the largest contributor of sukuk issues over the decades (IIFM, 2016). On a brighter side, the resurgence of interest in issuing sukuk by the Malaysian market can be evidently observed in 2016.

Student Number: 1247002



**Chart 4.1: Malaysia's Sukuk Growth Trajectory 2011-2016**

Source: Bond Pricing Agency Malaysia (2017)

By virtue of the volatilities in the global economy due to the global oil prices crash, current political developments in the Islamic world, and BNM's intervention in the Malaysian market as mentioned above, this could have potentially spawned the insensitivity of the regression results especially for GFCF, inflation rate, and labor force participation rate in this study.

## **CHAPTER 5 CONCLUSION AND RECOMMENDATIONS**

### **5.1 Research Objectives and Question Revisited**

The study focuses on the role of sukuk in developing Malaysia's economy and society. The expectation from this dissertation is to come up with contributions both theoretically and empirically. In particular, this paper aims to empirically showcase the relationship between sukuk issuance and the socioeconomic development in Malaysia between Q1 2011 and Q4 2016.

### **5.2 Summary of Findings**

The sukuk market is currently the greatest driver in Islamic Capital Market, leading to the phenomenal growth of Islamic finance space as witnessed in the last decades. Oftentimes, sukuk are used as a substitute for conventional bonds due to their similarities with the latter. Data shows that sukuk now rival conventional bonds especially in Malaysia. Therefore, it is worth noting that sukuk have emerged as a successful financial innovation and are steadily evolving into a mainstream asset class at best piecemeal. Hitherto, the advantages of raising sukuk are now widely discussed including their contribution to the socioeconomic growth in the country.

Malaysia has been successful in bringing about the development of the sukuk market since the early stages. The Malaysian government and regulators have been endeavoring to sustain and enhance its prestigious status in the global sukuk market as well as to facilitate its sukuk market by establishing a working regulatory, supervisory, and legal framework, inaugurating a strong Shariah governance framework as well as providing tax incentives for the cost of sukuk issued. Moreover, the Malaysian market is supported by diverse market intermediaries which persistently tap the sukuk market.

In Malaysia, sukuk are predominantly raised by such sectors including financial services, infrastructure and development, construction and engineering projects as well as the diversified holdings. Through the inception of SRI sukuk framework initiated by the Securities Commission Malaysia in 2014, Malaysia seems to be



Student Number: 1247002

one step ahead in contrast to other jurisdictions. Alongside the issuance of SRI sukuk by Khazanah Nasional Berhad in 2015 which was primarily aimed at improving the quality of education in the government schools, this theoretically exhibits that sukuk raised in Malaysia could generate a significant impact to the socioeconomic advancement.

This became the biggest motivation for the researcher to empirically investigate the relationship between sukuk and the development of Malaysia's economy and society. The study period was between Q1 2011 and Q4 2016 and the simple regression tests were conducted using EViews 9.0. Among the chosen dependent variables to denote Malaysia's economic and social conditions, the empirical findings revealed a statistically significant relationship between sukuk and Malaysia's GDP annual growth rate, CPI, interest rate, and unemployment rate over the span of Q1 2011 to Q4 2016. By comparison, other dependent variables that proxied socioeconomic conditions including Malaysia's GFCF, inflation rate, and labor force participation rate portrayed a non-significant relationship with sukuk throughout the study period. As justified earlier, this insensitivity might have emanated from the differences in the sample period and the circumstances of the jurisdiction. Consequently, the empirical findings did not manifest a wholly statistically significant relationship between sukuk and Malaysia's GFCF, inflation rate, and labor force participation rate for the period Q1 2011 to Q4 2016.

Holding other things constant, there is sufficient evidence to contend that sukuk issues play a significant role in Malaysia's economy and society between Q1 2011 and Q4 2016. Likewise, Echchabi, Abd Aziz, and Idriss (2016) have proven a statistically significant relationship between sukuk and economic growth in Malaysia. With a different set of sample period, Salam, Fakhfekh, and Hachicha (2016) also revealed a significant relationship between sukuk and economic growth in Malaysia. Meanwhile, the relationship between sukuk and Malaysia's social advancement has no empirical report so far as propagated by Syed Azman and Engku Ali (2016). Consequently, this study is envisaged to add more debates

Student Number: 1247002

and discussions on the contribution by the growing sukuk market to Malaysia's economy and society.

### **5.3 Implications of the Study**

This present study attempts to shed light on the relationship between sukuk and the socioeconomic development in Malaysia. This study hopefully adds to the scarce literature and benefits the readers who are oblivious on the robust growth of the Malaysian sukuk market which can potentially be a catalyst to the socioeconomic development of the country. With the employment of recent data ranging from Q1 2011 to Q4 2016, this present study also reflects the current state of the Malaysian sukuk market. Furthermore, this dissertation is among the earliest literature to demonstrate the role of sukuk in developing both economy and society in Malaysia. Hence, this dissertation is envisaged to outline the potential of sukuk in developing Malaysia's economy and society to the practitioners and non-practitioners which is yet to be fully disseminated.

Accordingly, this study may provide benefits to those involved in the Malaysian sukuk market especially the government, regulators, practitioners, and stakeholders. With a better understanding on the real potential of sukuk, it subsequently motivates more market participants to tap the sukuk market for the development of Malaysia's economy and society within the purview of Maqasid al-Shariah further spurring the development of Islamic Financial industry.

### **5.4 Recommendations for Future Research**

This paper only discusses on the contribution of sukuk as the niche financial instrument to develop Malaysia's economy and society. The future researcher can carry out a similar research in a broader context. For example, the future researcher can deliberate over eligible SRI projects such as the potential of Waqf in developing Malaysia's economy and society (see Appendix 15). This is supported by Sahari and Ab. Aziz (2014) who acknowledged the development of Waqf properties leads to a positive development in the economy and society.

Student Number: 1247002

Taking Singapore's Waqf model<sup>19</sup> as an ideal model, Malaysia endorses Cash Waqf, Waqf Shares, and Waqf of Gold to succor needy and poor societies regardless of their religions. To add more, the provision on Waqf shares under Section 11 of Wakaf (Negeri Sembilan) Enactment 2005 indicates the legitimacy of Waqf Bonds (Sukuk). In view thereof, Malaysia is now gearing up to debut Waqf Bonds anytime soon. Above all, the Waqf models in Malaysia are not limited to mosques and graveyards, they also accommodate modern subjects including clinics, buildings, orphanages, women's shelters, business premises, and education (Mahamood, 2014). Consequently, Waqf can be a vital tool to evolve the economy and society in a multiracial country like Malaysia.

Additionally, the future researcher can incorporate Zakat that has been very underdeveloped in several jurisdictions. Malaysia once again appears as one of the countries that has been committed in developing the economy and eradicating poverty by establishing the Zakat institution such as Lembaga Zakat Selangor and Pusat Pungutan Zakat Wilayah Persekutuan. Formally, this institution assists in eradicating poverty amongst needy and poor societies. Besides, it aims to reduce the impacts of recession of the economy on them through capacity building (Ab Rahman, Haji Alias, and Syed Omar, 2012). Therefore, Zakat is especially germane to Malaysia's society. Perhaps with the incorporation of Zakat in the future research, this provokes the Malaysian regulators to initiate new sukuk framework where the proceeds from the issuance is allocated directly to the Zakat institution and thereon utilized for the needy and poor societies in Malaysia.

## 5.5 Concluding Remarks

In a nutshell, sukuk are indeed a viable financing option in the global financial system. Currently, sukuk have become an essential instrument for fund-raising

---

<sup>19</sup> Majlis Ugama Islam Singapura (MUIS) in Singapore pioneered social sukuk to monetize Bencoolen Waqf (2002-2007). This has contributed to the evolution of Bencoleen street leading to a socioeconomic growth. See [https://www.asafas.kyoto-u.ac.jp/kias/pdf/kb9/03esf\\_02\\_nagaoka.pdf](https://www.asafas.kyoto-u.ac.jp/kias/pdf/kb9/03esf_02_nagaoka.pdf).

Student Number: 1247002

and investment activities especially in Malaysia. In particular, Malaysia has undertaken an arduous journey to prosper its sukuk market since the nascent stage, with unceasing efforts, support, and supervision by the government, regulators, and stakeholders. Recently, the Malaysia's Employee's Provident Fund (EPF) which is one of the major investors in the sukuk market, has successfully launched Simpanan Shariah<sup>20</sup> in January 2017 (EPF, 2017). This gives a further opportunity for Malaysia to broaden its sukuk market by funneling such huge amount of Shariah-compliant funds collected from this program to be invested in the socioeconomic development projects through sukuk financing model. Reading between the lines of the sukuk growth trajectory, the Malaysian sukuk market will no doubt continue to flourish in the coming decades. Indirectly, this would strengthen Malaysia's prestigious position as the leading Islamic financial hub across jurisdictions.

The Malaysian sukuk market is generally a promising sector. Following the Financial Stability and Payment Systems Report by BNM (2016), the market share of Islamic banking industry of the total banking assets in Malaysia has exceeded 28% as at December 2016. This is indeed a great achievement for Malaysia. However, it is still a long journey for the industry to be on par with conventional banking system. Akin to Malaysia's Islamic banking industry, the Malaysian sukuk market are now in the process of reaching its fullest potential in the financial system. As more market participants take notice of its real potential, sukuk can and will bring about a greater impact on Malaysia's economy and society. Hence, the hypotheses enumerated in Chapter 3 can be easily proven at that point of time.

Although the empirical findings portrayed that sukuk have not fully reached the threshold level to contribute to the socioeconomic development in Malaysia, the latest development in the Malaysian sukuk market is pointing towards a more

---

<sup>20</sup> An initiative by the Malaysia's EPF for the EPF's members, with the objective to manage their account pursuant to Shariah principles and to furnish their members with Shariah-compliant investments (EPF, 2017).



Student Number: 1247002

significant role in the socioeconomic development of the country. Perhaps, it was a bit too optimistic to see an immediate impact of sukuk issuances to the Malaysian socioeconomic development. It may be worthy to note that the MRT projects are still under development. Hence, this dissertation does not take into account the tremendous contribution to Kuala Lumpur's urban growth upon the completion of the MRT projects. This, therefore might have spawned the insensitivity between sukuk and GFCF, inflation rate, and labor force participation rate as noted during the study. Further, it was not possible to determine the actual impact of the SRI sukuk program barely two years after its launching in 2015. I note that even the students under the program are still in the process of undergoing their studies and will presumably enter the labor market between five to 10 years from now. Going forward, a stronger and more conclusive evidence on a statistically significant relationship between sukuk and the socioeconomic development of Malaysia could well be depicted upon the completion of both the MRT projects and the SRI sukuk program, in shaa Allah.



Student Number: 1247002

## REFERENCES

- Ab Rahman, A., Haji Alias, M., and Syed Omar, S. M. N. (2012) 'Zakat Institution in Malaysia', *Global Journal Al Thaqafah*, 2(1), pp. 35-41.
- Abdul Rahman, A. R. (2003) 'Accounting Regulatory Issues on Investments in Islamic Bonds', *International Journal of Islamic Financial Services*, 4(4).
- Amadeo, K. (2017) 'Components of GDP: Explanation, Formula and Chart', *The Balance*, 5 April. Available at: <https://www.thebalance.com/components-of-gdp-explanation-formula-and-chart-3306015> (Accessed: 15 April 2017).
- Bakar, D. M. D. (2008) 'Al-Suyulah: The Islamic Concept of Liquidity', in Bakar, D. M. D. and Engku Ali, D. E. R. A. (ed.) *Essential Readings in Islamic Finance*. Malaysia: CERT Publications Sdn. Bhd., pp. 417-439.
- Bakar, D. M. D. (2008) 'Riba and Islamic Banking and Finance', in Bakar, D. M. D. and Engku Ali, D. E. R. A. (ed.) *Essential Readings in Islamic Finance*. Malaysia: CERT Publications Sdn. Bhd., pp. 3-5.
- Bank Negara Malaysia (2016) *The Financial Stability and Payment Systems Report*. Available at: [http://www.bnm.gov.my/files/publication/fsps/en/2016/fs2016\\_book.pdf](http://www.bnm.gov.my/files/publication/fsps/en/2016/fs2016_book.pdf) (Accessed: 20 April 2017).
- Bank Negara Malaysia and Securities Commission Malaysia (2009) *Malaysian Debt Securities and Sukuk Market*. Malaysia: RAM Holdings Berhad.
- Beck, T., Demirguc-kunt. A., and Levine, R. (2004) 'Finance, Inequality, and Poverty: Cross-Country Evidence', *NBER Working Paper*, W10979.
- Bennett, M. (2015) *Vaccine Sukuks: Islamic Securities deliver economic and social returns*. Available at: <http://blogs.worldbank.org/arabvoices/vaccine-sukuks-islamic-securities-deliver-economic-and-social-returns> (Accessed: 3 March 2017).

Student Number: 1247002

Blumberg, B., Cooper, D. R., and Schindler, P. S. (2011) *Business Research Methods*. 3rd edn. Berkshire: McGraw-Hill Education.

Brooks, C. (2014) *Introductory Econometrics for Finance*. 3rd edn. United Kingdom: Cambridge University Press.

Business Monitor International (2012) *Malaysia Infrastructure Report Q3 2012*. London: Business Monitor International.

Colombage, S. R. N. (2009) 'Financial Markets and Economic Performances: Empirical Evidence from Five Industrialized Economies', *Research in International Business and Finance*, 23(2), pp. 339-348.

Danainfra (2017) *Frequently Asked Questions*. Available at: <http://www.danainfra.com.my> (Accessed: 3 February 2017).

Denscombe, M. (2010) *The Good Research Guide: For Small-Scale Social Research Projects*. 4th edn. Open University Press.

Dhrifi, A. (2013) 'Financial Development and Poverty: What Role for Growth and Inequality?', *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(4), pp. 119-129.

DiCecio, R. et al. (2008) 'Changing Trends in the Labor Force: A Survey', *Federal Reserve Bank of St. Louis Review*, 90(1), pp. 47-62.

Echchabi, A. and Azouzi, D. (2015) 'Islamic Finance Development and Economic Growth Nexus: The Case of the United Arab Emirates (UAE)', *American Journal of Economics and Business Administration*, 7(3), pp. 106-111.

Echchabi, A., Abd. Aziz, H., and Idriss, U. (2016) 'Does Sukuk Financing Promote Economic Growth? An Emphasis on the Major Issuing Countries', *Turkish Journal of Islamic Economics*, 3(2), pp. 63-73.

Engku Ali, D. E. R. A. (2008) 'Issues in Islamic Debt Securitization', in Bakar, D. M. D. and Engku Ali, D. E. R. A. (ed.) *Essential Readings in Islamic Finance*. Malaysia: CERT Publications Sdn. Bhd., pp. 443-491.

Student Number: 1247002

EPF (2017) *Simpanan Syariah*. Available at: <http://www.kwsp.gov.my/shariah/> (Accessed: 16 March 2017).

Favara, G. (2003) 'An Empirical Reassessment of the Relationship Between Finance and Growth', *IMF Working Paper*. Available at: <https://www.imf.org/external/pubs/ft/wp/2003/wp03123.pdf> (Accessed: 17 April 2017).

Fink, G. et al. (2006) *Financing through Bond Issues and the Nexus with Economic Growth*. Available at: [http://www.efmaefm.org/0EFMAMEETINGS/EFMA%20ANNUAL%20MEETINGS/2006-Madrid/papers/590687\\_full.pdf](http://www.efmaefm.org/0EFMAMEETINGS/EFMA%20ANNUAL%20MEETINGS/2006-Madrid/papers/590687_full.pdf) (Accessed: 22 April 2017).

Genovese, F. C. (1962) *Lombard Street: A Description of the Money Market by Walter Bagehot 1862-1877*. England: R. D. Irwin Homewood.

Ghauri, P. and Gronhaug, K. (2005) *Research Methods in Business Studies*. 3rd edn. Financial Times Prentice Hall.

Goaied, M. and Sassi, S. (2011) 'Financial Development and Economic Growth in the MENA Region: What about Islamic Banking Development?', *International Journal of Business and Management Science*, 4(2), pp. 1-23.

Godlewski, C. J., Turk-Ariss, R., and Weill, L. (2010) *Are Islamic Investment Certificates Special? Evidence on the Post-Announcement Performance of Sukuk Issues*. Available at: <https://poseidon01.ssrn.com/delivery.php?ID=022074007112124075122066022071066096052038021023029087122003072125112031077031005099058031037055107005101002083120074003075023010070031064016124112031026084104068067062019090002011030087118080123105105006123086025003118087005110098001066099110092003&EXT=pdf> (Accessed: 10 March 2017).

Student Number: 1247002

Grassa, R. and Gazdar, K. (2014) 'Financial Development and Economic Growth in GCC countries', *International Journal of Social Economics*, 41(6), pp. 493-514.

Grassa, R. and Said, A. (2013) 'The Determinants of Sukuk Market Development: Does Macroeconomic Factors Influence the Construction of Certain Structure of Sukuk?', *Journal of Applied Finance & Banking*, 3(5), pp. 251-267.

Grewal, B. K. (2013) 'Securitisation in Islamic Finance', in Archer, S. and Karim, R. A. A. (ed.) *Islamic Finance: The New Regulatory Challenge*. Singapore: John Wiley & Sons Singapore Pte. Ltd., pp. 339-363.

Grossman, S. J. and Miller, M. H. (1987) 'The Liquidity and Market Structure', *The Journal of Finance*, 43(3), pp. 617-633.

Hasan, M. and Dridi, J. (2010) 'The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study', *IMF Working Paper*. Available at: <https://www.imf.org/external/pubs/ft/wp/2010/wp10201.pdf> (Accessed: 26 March 2017).

Hicks, J. (1969) *A theory of economic theory*. Oxford: Clarendon Press.

Honohan, P. (2007) *Cross-country Variation in Household Access to Financial Services*. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.170.9339&rep=rep1&type=pdf> (Accessed: 23 March 2017).

Idris, A. N. (2017) 'RAM: Malaysia tops 2016 global sukuk market with US\$29.9b issuance', *The Edge Markets*, 25 January. Available at: <http://www.theedgemarkets.com/article/ram-malaysia-tops-2016-global-sukuk-market-us299b-issuance> (Accessed: 7 February 2017).



Student Number: 1247002

Iheanacho, E. (2016) 'The Impact of Financial Development on Economic Growth in Nigeria: An ARDL Analysis', *Economies*, 4(26), pp. 1-12. doi: 10.3390/economies4040026

Imam, P. and Kpodar, K. (2015) 'Is Islamic Banking Good for Growth?', *IMF Working Paper*. Available at: <https://www.imf.org/external/pubs/ft/wp/2015/wp1581.pdf> (Accessed: 25 February 2017).

International Islamic Financial Market (2010) *Sukuk Report 1<sup>st</sup> edition: A Comprehensive Study of the International Sukuk Market*. Available at: [http://www.iifm.net/system/files/private/en/IIFM%20SUKUK%20REPORT%201ST%20EDITION\\_3.pdf](http://www.iifm.net/system/files/private/en/IIFM%20SUKUK%20REPORT%201ST%20EDITION_3.pdf) (Accessed: 1 February 2017).

International Islamic Financial Market (2016) *Sukuk Report 5<sup>th</sup> Edition: A Comprehensive Study of the Global Sukuk Market*. Available at: <https://www.islamicfinance.com/wp-content/uploads/2016/04/IIFM-Sukuk-Report-5th-Edition-A-Comprehensive-study-of-the-Global-Sukuk-Market.pdf> (Accessed: 2 February 2017).

Iqbal, Z. and Mirakhor, A. (2011) *An Introduction to Islamic Finance: Theory and Practice*. 2nd edn. Singapore: John Wiley & Sons (Asia) Pte. Ltd.

Jahan, S., Mahmud, A. S., and Papageorgiou, C. (2014) 'What is Keynesian Economics?', *Finance & Development*, pp. 53-54

Jalilian, H. and Kirkpatrick, C. (2001) *Finance and Development Research Programme*. Available at: <https://pdfs.semanticscholar.org/5f02/c51cfd1ae0a3b07744ceff2d7b01494950fb.pdf> (Accessed: 3 March 2017).

Jobarteh, M. and Ergec, E. H. (2017) 'Islamic Finance Development and Economic Growth: Empirical Evidence from Turkey', *Turkish Journal of Islamic Economics*, 4(1), pp. 31-47.



Student Number: 1247002

Kassim, M. S. (2016) 'MRT, a boost for nation and the people', *Free Malaysia Today*, 21 December.

Khazanah (2015) *Khazanah Issues World's First Ringgit-denominated Sustainable and Responsible Investment Sukuk*. Available at: <http://www.khazanah.com.my/Media-Downloads/News-Press-Releases/2015/Khazanah-issues-world%E2%80%99s-first-ringgit-denominated> (Accessed: 28 February 2017).

Khoutem, D. B. J. (2014) 'Islamic banks-Sukuk markets relationships and economic development: The case of the Tunisian post-revolution economy', *Journal of Islamic Accounting and Business Research*, 5(1), pp. 47-60.

Levine, R. (1997) 'Financial Development and Economic Growth: Views and Agenda', *Journal of Economic Literature*, XXXV (June), pp. 688-726.

Mahamood, D. S. M. (2014) 'Awqaf Properties in Malaysia', *Islamic Finance Review*, 7 November. Available at: <http://isfire.net/awqaf-properties-in-malaysia/> (Accessed: 20 April 2017).

Mahmood, N. R. (2013) 'Regulating the Islamic Capital Market', in Archer, S. and Karim, R. A. A. (ed.) *Islamic Finance: The New Regulatory Challenge*. Singapore: John Wiley & Sons Singapore Pte. Ltd., pp. 387-397.

Mbu, P. (no date) *Impact of Mortgage Backed Securities, Sukuks, and Quantitative Easing: Case of The Kingdom of Saudi Arabia*. Available at: [http://www.academia.edu/20198026/IMPACT\\_OF\\_MORTGAGE\\_BACKED\\_SECURITIES\\_SUKUKS\\_AND\\_QUANTITATIVE\\_EASING\\_CASE\\_OF\\_THE\\_KINGDOM\\_OF\\_SAUDI\\_ARABIA](http://www.academia.edu/20198026/IMPACT_OF_MORTGAGE_BACKED_SECURITIES_SUKUKS_AND_QUANTITATIVE_EASING_CASE_OF_THE_KINGDOM_OF_SAUDI_ARABIA) (Accessed: 4 May 2017).

McClelland, A. and Macdonald, F. (1998) *The social consequences of unemployment*. Available at: [http://library.bsl.org.au/jspui/bitstream/1/266/1/social\\_consequences\\_of\\_unemployment\\_AMcClelland.pdf](http://library.bsl.org.au/jspui/bitstream/1/266/1/social_consequences_of_unemployment_AMcClelland.pdf) (Accessed: 15 April 2017).

Student Number: 1247002

- Md Nor, M. Z. (2016) 'Settling Islamic Finance Disputes: The Case of Malaysia and Saudi Arabia', *Law Explorer*, 19 March. Available at: <http://lawexplores.com/settling-islamic-finance-disputes-the-case-of-malaysia-and-saudi-arabia/#ch20fn-11> (Accessed: 15 April 2017).
- Mishkin, F. S. (2004) *The Economics of Money, Banking, and Financial Markets*. 7th edn. Pearson Addison Wesley: United States of America.
- Mohamad, S., Yusoff, M. F. M., and Qassar, A. A. A. (2010) 'Ground Rules for Sukuk Issuance', in Thomas, A. (ed.) *Sukuk*. Malaysia: Sweet & Maxwell Asia, pp. 17-40.
- Mohd Sultan, S. A. (2008) 'Islamic Banking: Trend, Development and Challenges', in Bakar, D. M. D. and Engku Ali, D. E. R. A. (ed.) *Essential Readings in Islamic Finance*. Malaysia: CERT Publications Sdn. Bhd., pp. 92-94.
- Mokhtar, S. et al. (2010) 'Sukuk and the Capital Markets', in Thomas, A. (ed.) *Sukuk*. Malaysia: Sweet & Maxwell Asia, pp. 17-40.
- Mughal, Z. (2017) '2017 will prove to be the best year for Islamic Financial market'. Available at: [https://www.nexis.com/results/enhdocview.do?docLinkInd=true&ersKey=23\\_T25503799947&format=GNBFI&startDocNo=0&resultsUrlKey=0\\_T25503799949&backKey=20\\_T25503799950&csi=400532&docNo=7](https://www.nexis.com/results/enhdocview.do?docLinkInd=true&ersKey=23_T25503799947&format=GNBFI&startDocNo=0&resultsUrlKey=0_T25503799949&backKey=20_T25503799950&csi=400532&docNo=7) (Accessed: 1 March 2017).
- Nazir, M. S., Nawaz, M. M., and Gilani, U. J. (2010) 'Relationship between economic growth and stock market development', *African Journal of Business Management*, 4(16), pp. 3473-3479.
- Nisar, D. S. (2010) *Experiences of Islamic Securities (Sukuk) in the World*. Available at: <http://www.shariqnisar.com/images/My%20Presentations/Experiences%2>

Student Number: 1247002

0of%20Islamic%20Securities%20(SUKUK)%20in%20the%20World.pdf  
(Accessed: 1 February 2017).

Office for National Statistics (2013) *Consumer Price Indices: A brief guide*.  
Available at: [www.ons.gov.uk](http://www.ons.gov.uk) (Accessed: 15 April 2017).

Ongo, E. N. and Vukenkeng, A. W. (2014) 'Does gross capital formation matter for economic growth in the CEMAC sub-region?', *EuroEconomica*, 33(2).

Ozturk, N. and Karagoz, K. (2012) 'Relationship Between Inflation and Financial Development: Evidence from Turkey', *International Journal of Alanya Faculty of Business*, 4(2), pp. 81-87.

Pagano, M. and Pica, G. (2011) *Finance and Employment*. Available at:  
<http://www.csef.it/WP/wp283.pdf> (Accessed: 5 May 2017).

Parker, M. (2016) 'Week 1: Introduction to Islamic Banking, Finance and Insurance (Takaful)'. FN7225: *Issues in Islamic Banking and Finance*.  
Available at: <https://moodle.uel.ac.uk/> (Accessed: 1 February 2017).

Pettinger, T. (2016) 'Effect of lower interest rates', *Economics Help*, 3 August.  
Available at: <http://www.economicshelp.org/blog/3417/interest-rates/effect-of-lower-interest-rates/> (Accessed: 19 March 2017).

RAM Ratings (2017) *Islamic Finance*. Available at:  
<https://www.ram.com.my/islamic-finance/> (Accessed: 2 February 2017).

Saad, N. M., Haniff, M. N., and Ali, N. (2016) 'Firm's Growth and Sustainability: The Role of Institutional Investors in Mitigating the Default Risks of Sukuk and Conventional Bonds', *Procedia Economics and Finance*, 35(2016), pp. 339-348.

Sahari, Z. B. and Ab. Aziz, M. R. B. (2014) 'An Exploratory Study on Instruments of Waqf Financing', *The Journal of Muamalat and Islamic Finance Research*. Available at:  
<https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3>

Student Number: 1247002

&cad=rja&uact=8&ved=0ahUKEwjUmrq0kbPTAhUHL1AKHbvWBYMQFggzMAl&url=https%3A%2F%2Fwww.researchgate.net%2Fprofile%2FMuhammad\_Ridhwan\_Ab\_Aziz%2Fpublication%2F268516483\_An\_Exploratory\_Study\_on\_Instruments\_of\_Waqf\_Financing%2Flinks%2F546e9cf70cf2bc99c2155a0c&usg=AFQjCNH2rnWMr6\_N8ufztJrP5rR2QcdITw&sig2=JktdliGzaXSOeWHxNCpCA (Accessed: 20 April 2017).

Salem, M. B., Fakhfekh, M., and Hachicha, N. (2016) 'Sukuk Issuance and economic growth: the Malaysian case', *Journal of Islamic Economics, Banking and Finance*, 12(2), pp. 202-214.

Saunders, M., Lewis, P., and Thornhill, A. (2009) *Research Methods for Business Students*. 5th edn. Pearson Education.

Schumpeter, J. A. (1982) *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle (1912/1934)*. Transaction Publishers.

Securities Commission Malaysia (2009) *The Islamic Securities (Sukuk) Market*. Malaysia: LexisNexis Malaysia Sdn Bhd.

Securities Commission Malaysia (2014) *Innovating Development of Waqf Assets Through Islamic Capital Market*. Available at: [https://www.sc.com.my/wp-content/uploads/eng/html/icm/14\\_04\\_14\\_msianicm.pdf](https://www.sc.com.my/wp-content/uploads/eng/html/icm/14_04_14_msianicm.pdf) (Accessed: 5 March 2017).

Securities Commission Malaysia (2015) *Capital Markets Malaysia: Financing the Future*. Available at: <http://www.capitalmarketsmalaysia.com/wp-content/uploads/2015/06/factsheet-financing.pdf> (Accessed: 15 February 2017).

Securities Commission Malaysia (2015) *Green Financing With Sustainable Growth – How Islamic Capital Market Can Play A Pivotal Role*. Available at: [https://www.sc.com.my/wp-content/uploads/eng/html/green/green\\_financing\\_with\\_sustainable\\_growth.pdf](https://www.sc.com.my/wp-content/uploads/eng/html/green/green_financing_with_sustainable_growth.pdf)



Student Number: 1247002

content/uploads/eng/html/icm/15\_12\_31\_msianicm.pdf (Accessed: 20 February 2017).

Securities Commission Malaysia (2016) *Annual Report 2016*. Available at: [https://www.sc.com.my/wp-content/uploads/eng/html/resources/annual/ar2016\\_eng/scar2016\\_eng.pdf](https://www.sc.com.my/wp-content/uploads/eng/html/resources/annual/ar2016_eng/scar2016_eng.pdf) (Accessed: 14 April 2017).

Securities Commission Malaysia (2016) *Financing Infrastructure Development Through ICM*. Available at: [https://www.sc.com.my/wp-content/uploads/eng/html/icm/16\\_08\\_25\\_msianicm.pdf](https://www.sc.com.my/wp-content/uploads/eng/html/icm/16_08_25_msianicm.pdf) (Accessed: 3 February 2017).

Seshachellam, P. (2013) 'The Role of Capital Markets in Providing Shari'ah-Compliant Liquidity', in Archer, S. and Karim, R. A. A. (ed.) *Islamic Finance: The New Regulatory Challenge*. Singapore: John Wiley & Sons Singapore Pte. Ltd., pp. 365-385.

Shabbir, G. et al. (2012) 'Contribution of Financial Sector Development in Reducing Unemployment in Pakistan', *International Journal of Economics and Finance*, 4(1), pp. 260-268.

Sirin, S. R. (2005) 'Socioeconomic Status and Academic Achievement: A Meta-Analytic Review of Research', *Review of Educational Research*, 75(3), pp. 417-453.

Stievano, A. D. C. (2004) *Finance-Growth Nexus in open economies with outliers*. Available at: <http://www.cefims.ac.uk/documents/research-42.pdf> (Accessed: 25 March 2017).

Stolbov, M. (2013) 'The Finance-Growth Nexus Revisited: From Origins to a Modern Theoretical Landscape', *Economics: The Open-Access, Open-Assessment E-Journal*, 7(2013-2), pp. 1-22.



Student Number: 1247002

Sukuk Summit (2016) *Rationale: The Need for Innovation*. Available at:  
<http://www.sukuksummit.co.uk> (Accessed: 17 April 2017).

Sunde, T. (2013) 'Financial development and economic growth: empirical evidence from Namibia (1990Q1-2011Q4)', *Journal of Emerging Issues in Economics, Finance and Banking*, 1(1), pp. 52-65.

Syed Azman, S. M. M. B. and Engku Ali, E. R. A. (2016) 'Potential Role of Social Impact Bond and Socially Responsible Investment Sukuk as Financial Tools that can Help Address Issues of Poverty and Socio-Economic Security', *Intellectual Discourse*, Special Issue, pp. 343-364.

*The Star* (2016) 'Maybank sets up RM10b sukuk programme, rated AAA', 14 December.

Wambugu, A. (2011) 'The effects of educational attainment on employment outcomes in Kenya', *International Journal of Education Administration and Policy Studies*, 3(7), pp. 94-102.

Xian, L. J. et al. (2015) *Comparison Between Performance of Sukuk and Conventional Bond in Malaysia*. Available at:  
<http://eprints.utar.edu.my/1520/1/FYP.pdf> (Accessed: 4 April 2017).

Zulhibri, M. (2015) 'A synthesis of theoretical and empirical research on sukuk', *Borsa Istanbul Review*, 15(4), pp. 237-248.

## APPENDICES

### Appendix 1: Common Sukuk Structures

Sukuk structure	Justification
Ijarah	<ul style="list-style-type: none"> <li>• A leasing structure associated with the right for the lessee to buy the leased asset at the end of the contract.</li> <li>• Used for project financing.</li> <li>• Depending on the contracts, the rental rates of return on sukuk are either fixed or floating.</li> </ul>
Musharakah	<ul style="list-style-type: none"> <li>• The price is associated with the performance of underlying assets on the basis of profit-and-loss-sharing structure.</li> <li>• Investors receive profits based on a pre-agreed ratio. By comparison, losses are shared based on the equity participation.</li> </ul>
Mudarabah	<ul style="list-style-type: none"> <li>• It denotes a partnership agreement involving Mudarib and Rab-ul-Maal where profits are shared among them, however, any losses are completely borne by Rab-ul-Maal.</li> <li>• Owing to a higher risk in Sukuk Mudarabah, the return to investors are greater than Sukuk Musharakah.</li> </ul>
Istisna	<ul style="list-style-type: none"> <li>• Commonly utilized to finance green-field infrastructure projects, of which the underlying assets do not exist yet.</li> <li>• In particular, the issuer sells the identified assets that will be constructed in future. Meanwhile, the financier sells back the assets to the issuer on deferred payment basis.</li> </ul>

Student Number: 1247002

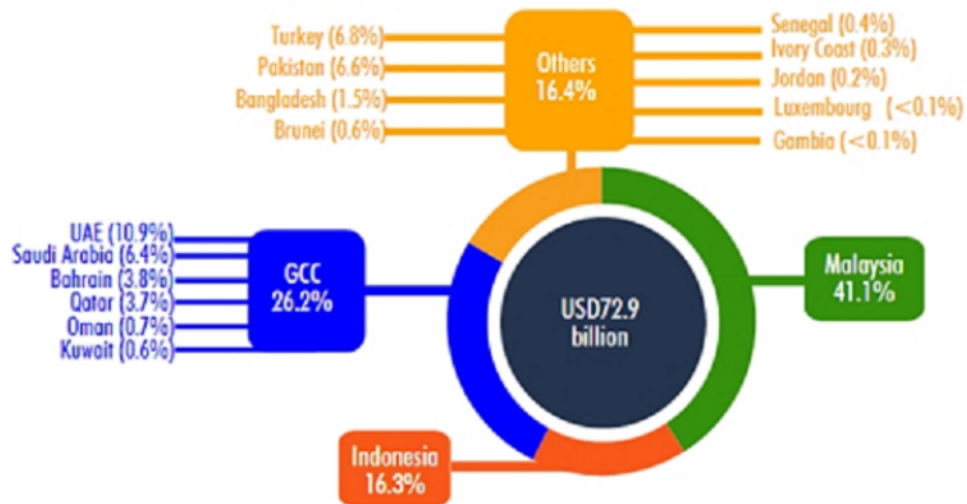
Istithmar	<ul style="list-style-type: none"> <li>• Used for direct investments in a bundle of assets and therefore is hybrid in nature.</li> <li>• For instance, the underlying assets are made up of Murabahah receivables with tangible assets (e.g. Ijarah lease rentals) in a ratio of 70:30 respectively.</li> </ul>
Wakalah	<ul style="list-style-type: none"> <li>• A wakeel (agent) performs the activity based on the Wakalah principle, is appointed on behalf of the sukuk-holder and also receives a management fee.</li> <li>• Example: The issuer (wakeel) enters into any contracts such as Ijarah, where the proceeds are deployed to finance a Shariah-compatible project.</li> </ul>
Salam	<ul style="list-style-type: none"> <li>• A contract sale in which the buyer pays on the spot whilst the delivery of asset is deferred by the seller.</li> <li>• Commonly used for short-term financing.</li> </ul>
Murabahah	<ul style="list-style-type: none"> <li>• Issuers are basically the sellers of the Murabahah commodity and investors are the buyers of the commodity.</li> <li>• Sukuk-holders are the owner of the Murabahah commodity and are entitled to the final sale price upon the resale of the commodity.</li> </ul>

Source: Grewal, B. K. (2013) 'Securitisation in Islamic Finance', in Archer, S. and Karim, R. A. A. (ed.) *Islamic Finance: The New Regulatory Challenge*. Singapore: John Wiley & Sons Singapore Pte. Ltd., pp. 339-363.

Student Number: 1247002

## Appendix 2: Global Sukuk Issuance by Country end-2016

**Figure 2: Composition of global sukuk issuance by country end-2016**

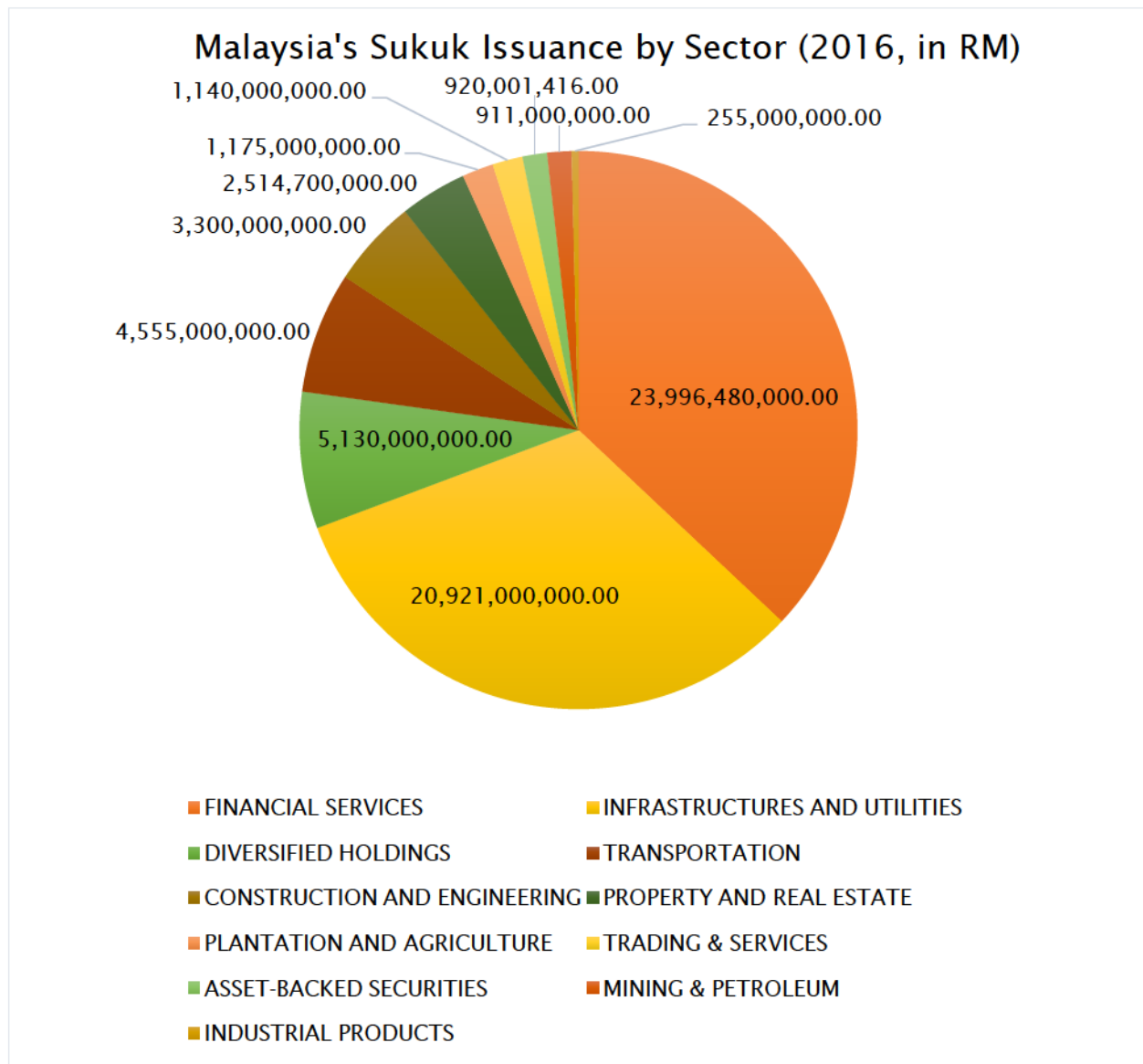


Sources: Eikon Thomson Reuters, RAM

Source: RAM Ratings (2017)

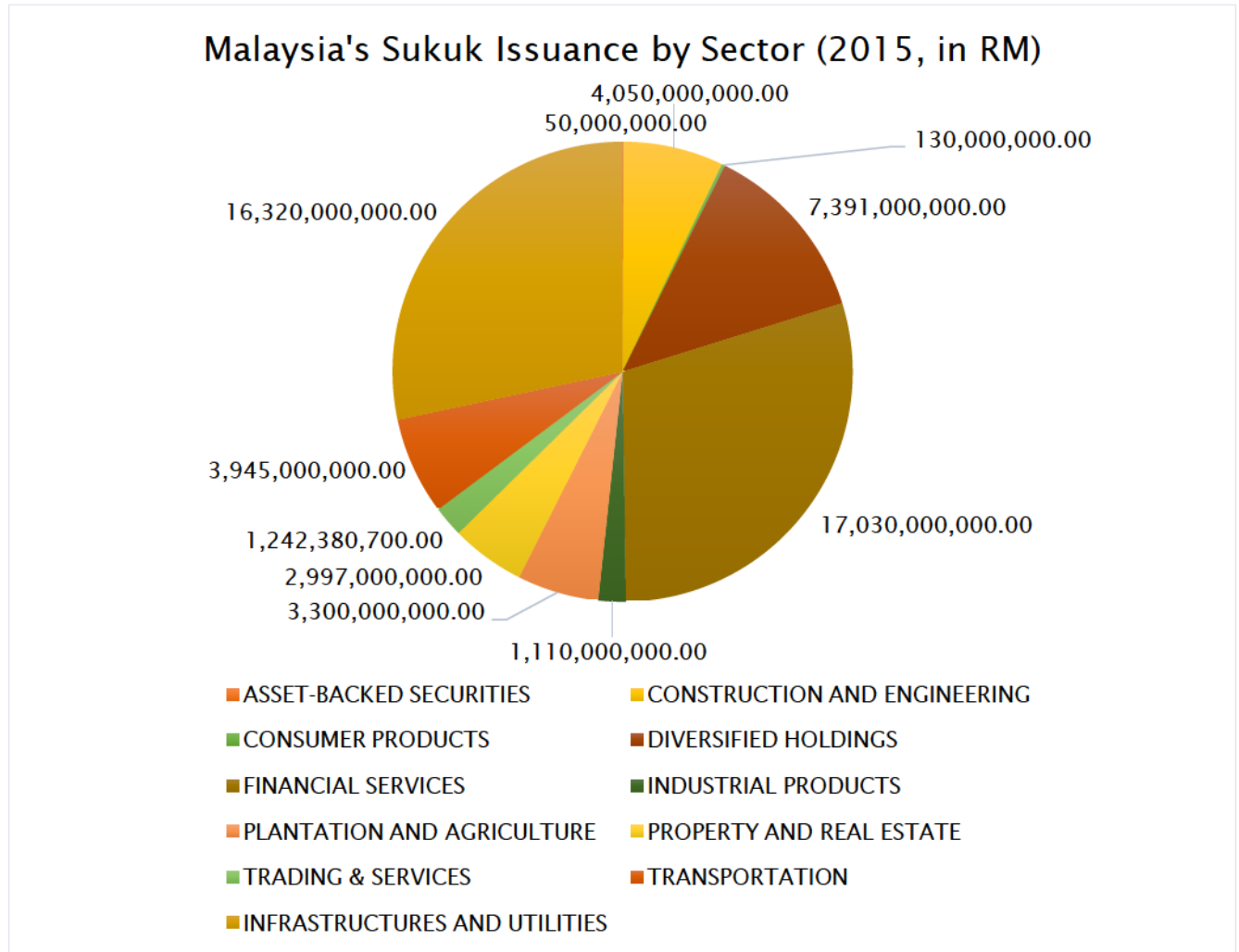
Student Number: 1247002

### Appendix 3: Malaysia's Sukuk Issuance by Sector 2014-2016

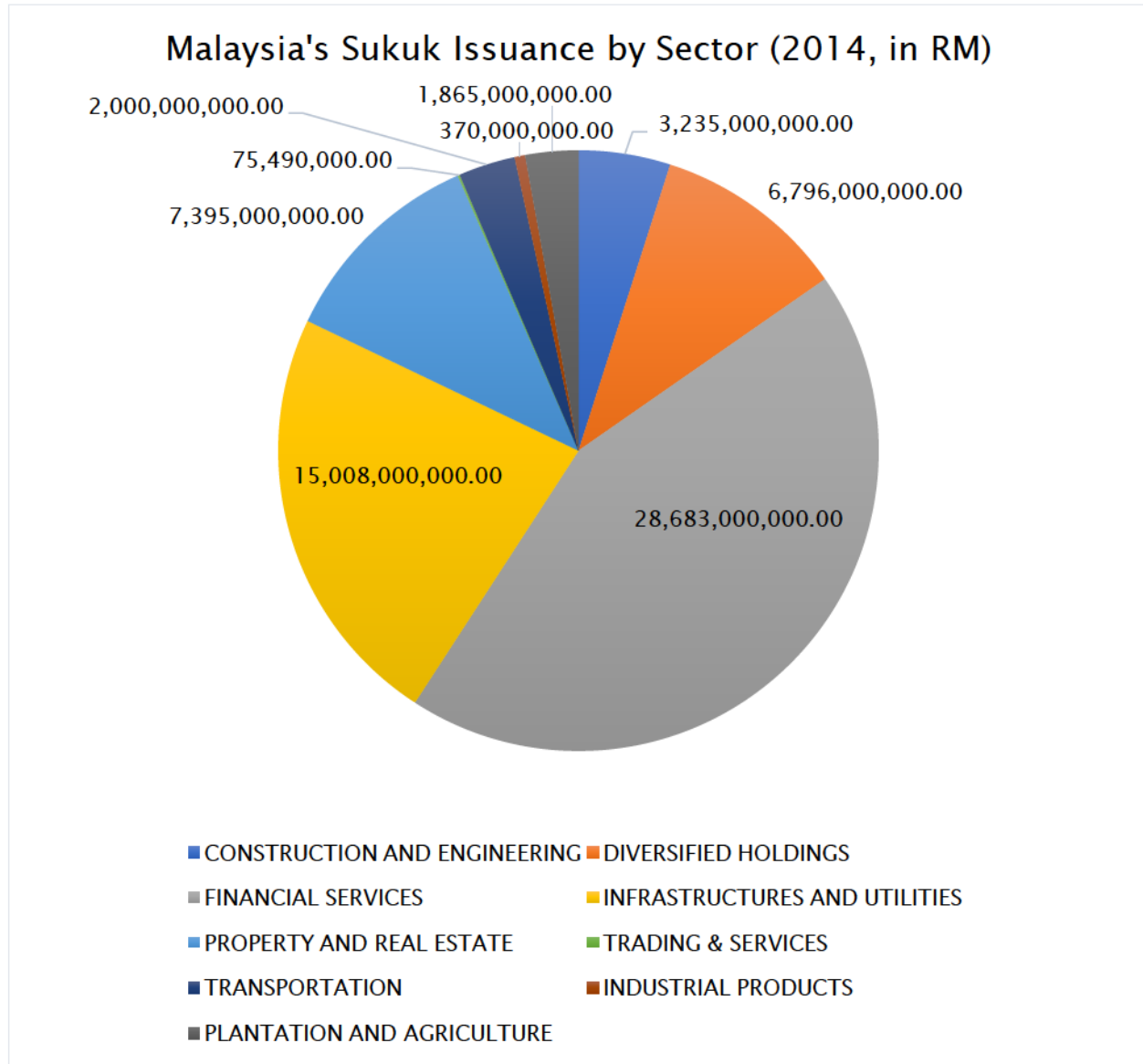


Source: Bond Pricing Agency Malaysia (2017)





Source: Bond Pricing Agency Malaysia (2017)

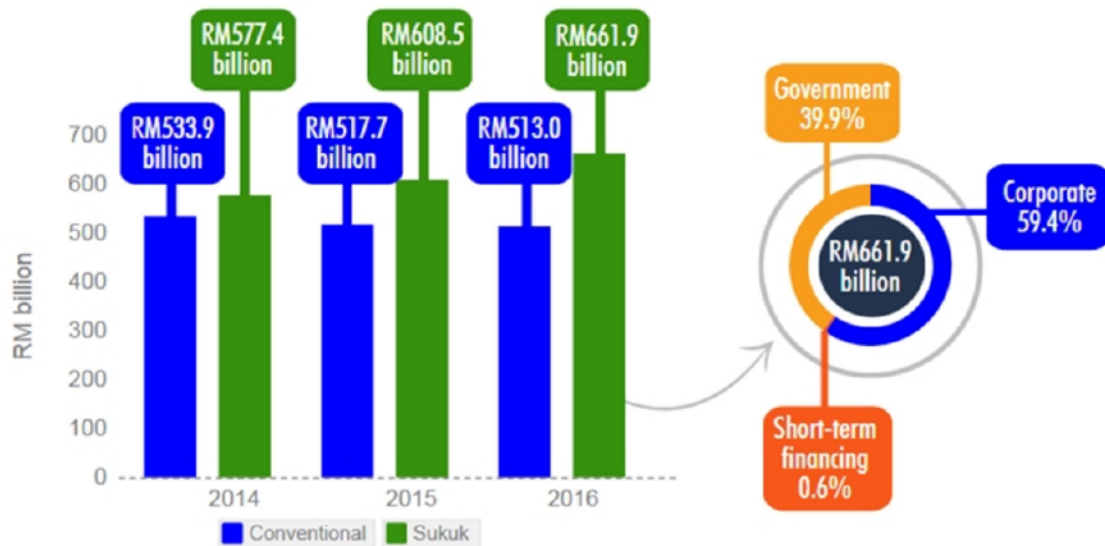


Source: Bond Pricing Agency Malaysia (2017)

Student Number: 1247002

#### Appendix 4: Malaysia's Outstanding Domestic Sukuk and Conventional Bond Market 2014-2016

**Figure 1: Malaysia's outstanding domestic sukuk and conventional bond market 2014 – 2016**



Sources: BPAM, RAM

Source: RAM Ratings (2017)

Student Number: 1247002

#### **Appendix 5: Key Performance Indicators (SRI Sukuk Program)**

- A minimum of 20 schools are selected under Yayasan AMIR's Trust Schools Programme for a five (5)-year intervention period.
- At least 50% of the teachers of the Identified Schools are rated at the Establishing level or above in their observations after the end of their Intervention Period.
- At least 50% of the senior leadership of the Identified Schools are rated at the Establishing level or above in their observations after the end of their Intervention Period.

Source: Syed Azman, S. M. M. B. and Engku Ali, E. R. A. (2016) 'Potential Role of Social Impact Bond and Socially Responsible Investment Sukuk as Financial Tools that can Help Address Issues of Poverty and Socio-Economic Security', *Intellectual Discourse*, Special Issue, pp. 343-364.

Student Number: 1247002

**Appendix 6: Quarterly Data 2011-2016**Malaysia's GDP Annual Growth Rate

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	5.2	4.3	5.7	5.3
2012	5.1	5.6	5.3	6.5
2013	4.2	4.5	5	5.1
2014	6.3	6.5	5.6	5.7
2015	5.7	4.9	4.7	4.5
2016	4.2	4	4.3	4.5

Source: Department of Statistics Malaysia (2017)

Malaysia's GFCF, in RM Million

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	45936	49348	49137	51575
2012	52189	61788	59669	59557
2013	58704	65373	64896	63189
2014	62656	69912	65738	65930
2015	67585	70192	68523	67708
2016	67629	74501	69860	69343

Source: Department of Statistics Malaysia (2017)



Student Number: 1247002

Malaysia's CPI

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	102.17	102.9	103.6	104.1
2012	104.5	104.67	105	105.47
2013	106.07	106.53	107.27	108.6
2014	109.73	110.03	110.5	111.67
2015	110.47	112.4	113.8	114.57
2016	114.27	114.57	115.33	116.4

Source: Department of Statistics Malaysia (2017)

Malaysia's Inflation Rate

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	2.77	3.33	3.37	3.23
2012	2.33	1.77	1.4	1.3
2013	1.47	1.77	2.17	2.97
2014	3.47	3.3	3.03	2.83
2015	0.67	2.13	3	2.6
2016	3.43	1.9	1.37	1.67

Source: Department of Statistics Malaysia (2017)

Student Number: 1247002

Malaysia's Interest Rate

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	2.75	2.92	3	3
2012	3	3	3	3
2013	3	3	3	3
2014	3	3	3.25	3.25
2015	3.25	3.25	3.25	3.25
2016	3.25	3.25	3	3

Source: Bank Negara Malaysia (2017)

Malaysia's Unemployment Rate

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	3.1	3.07	3.13	3.07
2012	3.03	3	3	3.13
2013	3.2	3.03	3.07	3.23
2014	3.17	2.87	2.73	2.8
2015	3.07	3.07	3.23	3.3
2016	3.43	3.43	3.5	3.47

Source: Department of Statistics Malaysia (2017)

Student Number: 1247002

Malaysia's Labor Force Participation Rate

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	64.37	64.2	64.73	64.17
2012	64.97	65.1	65.33	64.97
2013	65.47	66.73	68.93	68.7
2014	67.37	67.57	67.47	67.6
2015	67.43	67.63	67.73	67.8
2016	67.73	67.7	67.73	67.63

Source: Department of Statistics Malaysia (2017)

Malaysia's Sukuk Issuance, in RM Million

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2011	44189	47600	41414	47971
2012	96605	57375	100178	74193
2013	78029	62164	57883	77696
2014	67219	68655	67750	59138
2015	21920	37063	15620	40097
2016	33069	29586	36877	29912

Source: Bond Pricing Agency Malaysia (2017)

Student Number: 1247002

**Appendix 7: Descriptive Statistics**

Date: 04/29/17

Time: 13:15

Sample: 2011Q1 2016Q4

	S	GDP	GFCF	CPI	I	R	UR	LF
Mean	53841.79	5.112500	62539.08	108.9417	2.386111	3.069444	3.130556	66.62778
Median	52673.00	5.100000	65134.50	109.1667	2.466667	3.000000	3.083334	67.45000
Maximum	100178.0	6.500000	74501.00	116.4000	3.466667	3.250000	3.500000	68.93333
Minimum	15620.00	4.000000	45936.00	102.1667	0.666667	2.750000	2.733333	64.16667
Std. Dev.	22276.52	0.735032	7786.753	4.446104	0.829581	0.140450	0.197794	1.519269
Skewness	0.330401	0.350166	-0.736050	0.131135	-0.289639	0.099985	0.152303	-0.388749
Kurtosis	2.428365	2.194233	2.472301	1.667355	1.867881	2.306852	2.721162	1.661095
Jarque-Bera	0.763426	1.139726	2.445546	1.844729	1.617256	0.520442	0.170536	2.397169
Probability	0.682691	0.565603	0.294413	0.397578	0.445469	0.770881	0.918266	0.301621
Sum	1292203.	122.7000	1500938.	2614.600	57.26667	73.66667	75.13333	1599.067
Sum Sq. Dev.	1.14E+10	12.42625	1.39E+09	454.6603	15.82870	0.453704	0.899815	53.08807
Observations	24	24	24	24	24	24	24	24

Student Number: 1247002

**Appendix 8: Regression Result - GDP Annual Growth Rate**

Dependent Variable: GDP  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:10  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.472240	0.381190	11.73232	0.0000
S	1.19E-05	6.56E-06	1.812177	0.0836
R-squared	0.129884	Mean dependent var		5.112500
Adjusted R-squared	0.090333	S.D. dependent var		0.735032
S.E. of regression	0.701047	Akaike info criterion		2.207172
Sum squared resid	10.81228	Schwarz criterion		2.305343
Log likelihood	-24.48607	Hannan-Quinn criter.		2.233217
F-statistic	3.283986	Durbin-Watson stat		1.668135
Prob(F-statistic)	0.083631			



Student Number: 1247002

**Appendix 9: Regression Result - Gross Fixed Capital Formation**

Dependent Variable: GFCF  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:11  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	68711.52	4089.705	16.80109	0.0000
S	-0.114640	0.070402	-1.628359	0.1177
R-squared	0.107561	Mean dependent var		62539.08
Adjusted R-squared	0.066996	S.D. dependent var		7786.753
S.E. of regression	7521.391	Akaike info criterion		20.76855
Sum squared resid	1.24E+09	Schwarz criterion		20.86672
Log likelihood	-247.2225	Hannan-Quinn criter.		20.79459
F-statistic	2.651554	Durbin-Watson stat		0.252835
Prob(F-statistic)	0.117686			

Student Number: 1247002

**Appendix 10: Regression Result - Consumer Price Index**

Dependent Variable: CPI  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:12  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	114.6299	2.097185	54.65892	0.0000
S	-0.000106	3.61E-05	-2.926324	0.0078
R-squared	0.280184	Mean dependent var		108.9417
Adjusted R-squared	0.247465	S.D. dependent var		4.446104
S.E. of regression	3.856940	Akaike info criterion		5.617281
Sum squared resid	327.2717	Schwarz criterion		5.715452
Log likelihood	-65.40737	Hannan-Quinn criter.		5.643325
F-statistic	8.563373	Durbin-Watson stat		0.449020
Prob(F-statistic)	0.007818			

Student Number: 1247002

**Appendix 11: Regression Result - Inflation Rate**

Dependent Variable: I  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:12  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.465285	0.460857	5.349349	0.0000
S	-1.47E-06	7.93E-06	-0.185355	0.8546
R-squared	0.001559	Mean dependent var		2.386111
Adjusted R-squared	-0.043824	S.D. dependent var		0.829581
S.E. of regression	0.847564	Akaike info criterion		2.586754
Sum squared resid	15.80402	Schwarz criterion		2.684925
Log likelihood	-29.04105	Hannan-Quinn criter.		2.612799
F-statistic	0.034356	Durbin-Watson stat		0.901078
Prob(F-statistic)	0.854649			

Student Number: 1247002

**Appendix 12: Regression Result - Interest Rate**

Dependent Variable: R  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:13  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.204783	0.071611	44.75259	0.0000
S	-2.51E-06	1.23E-06	-2.039037	0.0536
R-squared	0.158947	Mean dependent var		3.069444
Adjusted R-squared	0.120717	S.D. dependent var		0.140450
S.E. of regression	0.131700	Akaike info criterion		-1.136921
Sum squared resid	0.381589	Schwarz criterion		-1.038750
Log likelihood	15.64306	Hannan-Quinn criter.		-1.110876
F-statistic	4.157671	Durbin-Watson stat		0.561252
Prob(F-statistic)	0.053639			

Student Number: 1247002

**Appendix 13: Regression Result - Unemployment Rate**

Dependent Variable: UR  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:13  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.358426	0.096670	34.74106	0.0000
S	-4.23E-06	1.66E-06	-2.543204	0.0185
R-squared	0.227199	Mean dependent var		3.130556
Adjusted R-squared	0.192072	S.D. dependent var		0.197794
S.E. of regression	0.177787	Akaike info criterion		-0.536811
Sum squared resid	0.695377	Schwarz criterion		-0.438640
Log likelihood	8.441730	Hannan-Quinn criter.		-0.510766
F-statistic	6.467885	Durbin-Watson stat		0.610491
Prob(F-statistic)	0.018528			



Student Number: 1247002

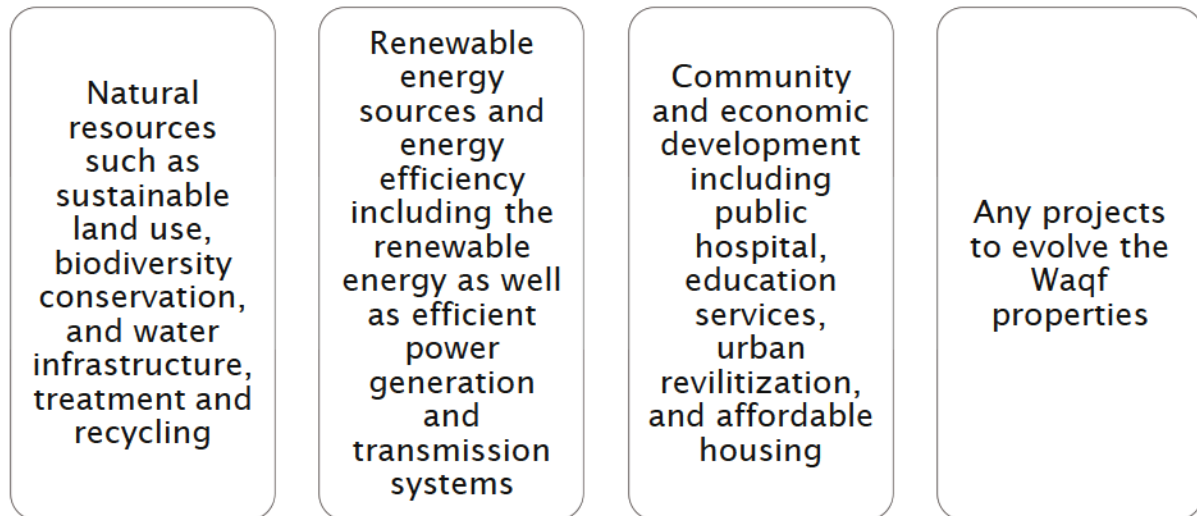
**Appendix 14: Regression Result - Labor Force Participation Rate**

Dependent Variable: LF  
 Method: Least Squares  
 Date: 04/29/17 Time: 13:13  
 Sample: 2011Q1 2016Q4  
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	67.64597	0.811538	83.35527	0.0000
S	-1.89E-05	1.40E-05	-1.353645	0.1896
R-squared	0.076885	Mean dependent var		66.62778
Adjusted R-squared	0.034925	S.D. dependent var		1.519269
S.E. of regression	1.492502	Akaike info criterion		3.718440
Sum squared resid	49.00638	Schwarz criterion		3.816612
Log likelihood	-42.62129	Hannan-Quinn criter.		3.744485
F-statistic	1.832355	Durbin-Watson stat		0.310487
Prob(F-statistic)	0.189594			

Student Number: 1247002

### Appendix 15: Eligible SRI Projects



Source: Securities Commission Malaysia (2014) *Innovating Development of Waqf Assets Through Islamic Capital Market*. Available at: [https://www.sc.com.my/wp-content/uploads/eng/html/icm/14\\_04\\_14\\_msianicm.pdf](https://www.sc.com.my/wp-content/uploads/eng/html/icm/14_04_14_msianicm.pdf) (Accessed: 5 March 2017).